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ABSTRACT

This report evaluates the Education Consolidation and Improvement Act (ECIA) Chapter 1 program in the Chicago (Illinois) Public Schools for 1988-89. The purpose of the program was to serve the most educationally needy students residing in eligible school attendance areas through supplementary and categorical activities. Services were scheduled in 1988-89 in 257 public elementary schools, 111 nonpublic elementary schools, 35 public high schools, and 15 nonpublic high schools. Participants included more than 73,000 students, and more than 1,500 teachers, aides, and other staff were involved at a cost of about $85 million. This evaluation report for fiscal 1989 is a compilation of separate reports on all aspects of the Chapter 1 program outlined in the annual application for Federal funding. Objectives and findings are reported concerning improvement in the following areas: (1) school performance generally; (2) student reading skills; (3) student mathematics skills; (4) English language skills of bilingual students; (5) student motivation and behavior; (6) student vocational skills; (7) student health; (8) participation and involvement of parents; (9) skills of the teaching staff; and (10) high school completion rates. Chapter 1 offerings are presented within the following categories: (1) supplementary instructional approaches; (2) supportive services; (3) special programs; (4) secondary supplementary services; and (5) nonpublic instructional and support services. Statistical data in tables are included. (AF)

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REPORT

RESEARCH, EVALUATION & PLANNING

EVALUATION OF THE FISCAL 1989 EDUCATION CONSOLIDATION AND IMPROVEMENT ACT (ECIA) CHAPTER 1 PROGRAM

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Ted D. Kimbrough
General Superintendent of Schools

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EVALUATION OF THE FISCAL 1989 EDUCATION CONSOLIDATION AND IMPROVEMENT ACT (ECIA) CHAPTER 1 PROGRAM

Bureau of Program Evaluation
Department of Research, Evaluation and Planning

TED D. KIMBROUGH
General Superintendent of Schools

CHICAGO PUBLIC SCHOOLS

October 1990

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INTRODUCTION

The purpose of the Education Consolidation and Improvement Act (ECIA) Chapter 1 program in the Chicago Public Schools in 1988-89 was to serve the most educationally needy students residing in eligible school attendance areas. The activities were to be supplementary and categorical and were not to supplant programs provided by local and state funds.

Services were scheduled in 1988-89 in 257 public elementary schools, 111 nonpublic elementary schools, 35 public high schools, and 15 nonpublic high schools. Participants included more than 73,000 students and involved more than 1,500 teachers, aides, and other staff at a cost of about $85 million.

The evaluation plan in the *ECIA Chapter 1 Application: Fiscal 1989* stated formal program objectives and listed the methods by which data would be collected to measure accomplishments of the objectives and to also account for differences in performance by school and program. Data were collected and analyzed by staff of the Department of Research, Evaluation and Planning.

This evaluation report for fiscal 1989 is a compilation of separate reports on all aspects of the Chapter 1 program outlined in the application. A summary of the results of the formal objectives appears at the beginning of the report. Most of the separate reports offer conclusions and specific recommendations.

The data in this document can provide local school personnel and council members with points of comparison with their own results as they plan for Chapter 1 program improvement. The report as a whole can also inform Chapter 1 administrators of program limitations and strengths as they plan for the future.

A.

GENERAL EVALUATION OBJECTIVES AND FINDINGS

GENERAL EVALUATION OBJECTIVES AND FINDINGS

To improve school performance generally:

1. *At each participating school, the average gain in reading comprehension for students who received ECIA Chapter 1 instruction in reading, were enrolled in second grade through high school, and were not placed in bilingual instructional categories A or B will be at least two normal curve equivalents (NCEs). [ITBS, TAP]*

In 64 of the 257 Chapter 1 elementary schools (25 percent), the average gain in reading was two NCE units or more. The objective for each participating school to reach this standard was not met.

2. *At each participating school, at least 60 percent of the students who received ECIA Chapter 1 instruction in reading, were enrolled in second grade through high school, and were not placed in bilingual instructional categories A or B will improve their NCEs in reading comprehension from pre- to posttest. [ITBS, TAP]*

In 35 of the 257 Chapter 1 elementary schools (14 percent), 60 percent or more of the students improved in reading. The objective for each participating school to show this much improvement was not met.

To improve the student's reading skills:

3. *By the end of the school year, at least 80 percent of the preschool students will have mastered 80 percent of the preschool curriculum appropriate for their age; at least 80 percent of kindergarten students will have demonstrated a level of reading readiness appropriate for entry into first grade; and at least 80 percent of first grade students will have demonstrated a level of reading skills appropriate for entry into second grade. [EARLY, Prekindergarten CRTs, Metropolitan Readiness Tests, CPS Learning Outcomes]*

Prekindergarten Results - In a sample of Chapter 1 prekindergartners in regular elementary schools, more than 80 percent of the first-year participants and more than 90 percent of the second-year participants mastered more than 80 percent of the skills on the EARLY posttest and the prekindergarten criterion-referenced tests (CRTs). The objective was met.

In a sample of Child-Parent Center prekindergartners, 79 percent of the first-year participants met the goal on the EARLY posttest and 69 percent met the goal on the prekindergarten CRTs. More than 80 percent of the second-year Child-Parent Center prekindergartners met the goal on the EARLY test and 72 percent met the goal on the CRTs. These results are somewhat short of the stated objective.

Kindergarten Results - More than 90 percent of the Chapter 1 kindergartners in regular elementary schools and in Child-Parent Centers were in the process of learning or had mastered the skills assessed on the subtests of the Metropolitan Readiness Test. Given the generally high scores on the measurement instrument, it can be inferred that the stated objective was met.

4. *The average gain in reading comprehension for students enrolled in grades two through high school and not placed in bilingual instructional categories A or B will be at least two NCE units. [ITBS, TAP].*

The average gain in reading from 1988 to 1989 in 257 elementary schools was 0.3 NCE units, less than the two NCE units anticipated. The stated objective was not met.

5. *At least 60 percent of the students enrolled in grades two through high school and not placed in bilingual instructional categories A or B will improve their NCEs in reading comprehension from pre- to posttest. [ITBS, TAP]*

Test scores for 24,786 elementary students enrolled in Chapter 1 reading programs for at least eight months indicated that 49.8 percent showed a gain from 1988 to 1989, less than the 60 percent anticipated. The stated objective was not met.

To improve the student's mathematics skills:

6. *The average gain in mathematics for students enrolled in grades two through high school will be at least two NCE units. [ITBS, TAP]*

The average gain in Mathematics Total from 1988 to 1989 in 216 elementary schools with Chapter 1 mathematics programs was 0.2 units,less than the two NCE units anticipated. The stated objective was not met.

7. *At least 60 percent of students enrolled in grades two through high school will improve their NCEs in mathematics from pre- to posttest. [ITBS, TAP]*

Test scores for 15,043 elementary students enrolled in Chapter 1 mathematics programs for at least eight months indicate that 48.3 percent showed a gain in mathematics from 1988 to 1989, short of the 60 percent anticipated. The stated objective was not met.

To improve the English language skills of bilingual students:

8. *At least 75 percent of the students placed in bilingual instruction categories A or B at the beginning of the school year will advance to at least the next higher category by the end of the school year. [Bilingual Census]*

The records of limited-English-proficient (LEP) students who participated in the Chapter 1 program in fiscal 1989 were examined to ascertain their degree of transition to the next or a higher level. From June 1988 to June 1989, 44 percent of the 1,751 Chapter 1 students in Category A advanced to Category B or a higher level, and 52 percent of the 1,475 students in Category B advanced to Category C or were transitioned into the general program. Though the objective for 75 percent of the students to transition to a higher level was not met, the results for these Chapter 1 students was much higher than that reported for the citywide bilingual program.

To improve the student's motivation and behavior:

9. *Teachers will report that at least 80 percent of the students maintained acceptable levels of, or improved in, classroom and social behavior. [Teacher questionnaires, Kindergarten Assessment Form]*

Classroom Teachers - Teachers in self-contained programs (N=346) estimated that an average of 81 percent of their students maintained their current level or improved in classroom and social behavior. Non-Chapter 1 teachers (N=595) who sent their students to Chapter 1 classes estimated that 62 percent of their students had maintained their previous level or improved in these areas. In terms of Chapter 1 teacher opinion, the stated objective was met. According to non-Chapter 1 teachers, the stated objective was not met.

Chapter 1 kindergarten children were assessed by their teachers on a set of 12 behavioral traits related to social/emotional development and school success. Ratings were available for 381 pupils in the Augmented Staffing Half-Day Kindergartens and for 348 All-Day Kindergarten pupils.

Both kindergarten groups exhibited acceptable levels of social behavior. The Augmented Staffing Half-Day Kindergarten ratings were all in the 90 percent range on eagerness to learn, willingness to participate, and pride in accomplishment; All-Day Kindergarten ratings were just slightly lower on these traits. On happiness in school, both groups were rated above 90 percent. The stated objective was met.

Child-Parent Centers - Teachers rated 357 Child-Parent Center kindergarten pupils on a set of 12 behavioral traits that were related to social/emotional development. These traits are also deemed important to school success. The ratings of 108 half-day kindergartners were given by 5 of their teachers, and ratings on 249 all-day kindergarten pupils by 12 of their teachers. Overall, more than 90 percent of the pupils were said to be happy in school, willing to participate, eager to learn, and took pride in their accomplishments. The stated objective was met.

Family Guidance Center - The Family Guidance Center (FGC) provided counseling and psychological services to recommended Chapter 1 elementary school students and their families. From 1987 through 1989, the school staffs reported that from 71 percent to 77 percent of the students participating in the FGC showed general social improvement. The stated objective was not met.

Life Skills Learning Center - Teachers in Life Skills Learning Centers reported monthly on the participation of the students they served. In this reporting scheme, they observed the behavior of each student. These indications show that 97 percent of the students for whom information was available were cooperative during the time they were assigned. Student improvement in classroom and social behavior was assessed by teacher survey. Responding teachers, on the average, estimated that slightly less than half the students they served actually improved their classroom and social behavior.

10. *Teachers will report that at least 80 percent of the students enjoyed the enrichment experiences and that these experiences increased their interest in schoolwork. [Teacher questionnaires]*

Instructional Laboratories for the Teaching of Science, Art,or the Creative Arts - The Instructional Laboratories were designed as a supplement for qualifying Chapter 1 students. The program was staffed by itinerant teachers who moved from school to school, bringing their expertise in either science, art, or the creative arts. During the 1988-89 school year, 26 schools enrolled 2,915 students in this activity, with a majority of the schools selecting the Teaching of Reading through Science as their focus. Of those teachers responding to the question of whether or not students enjoyed the enrichment experiences and of whether these experiences increased their interest in schoolwork, more that 80 percent of the teachers answered in the affirmative. Less than 5 percent of the responding teachers indicated that their students did not enjoy the experiences. The stated objective was met.

Field Experiences - Field Experiences provided pupils with field trips to familiarize them with community resources, to promote constructive use of leisure time, and to expand awareness of possible career opportunities. Chapter 1 teachers and teacher aides provided program orientation and follow-up activities. During the 1988-89 school year, approximately 14,000 students participated in the program.

Of the 155 responding teachers in self-contained programs, 71 percent indicated that 80 percent or more of their students enjoyed the field trips and showed an increased interest in schoolwork. The Chapter 1 teachers' average estimate was 71 percent. Over half of the 337 non-Chapter 1 teachers who responded to a questionnaire said that 80 percent or more of their Chapter 1 students enjoyed the trip and became more interested in schoolwork. The non-Chapter 1 teachers' average estimate was 63 percent. The percent of students estimated to have enjoyed the trips and gained interest in school work did not meet the stated objective.

Outdoor Education and Camping - This activity provided coeducational outdoor education and camping experiences for participating students. Approximately 1,500 students from 37 schools were served in the camping program. The activities, conducted in a natural setting, corresponded closely with home school curriculum and enabled students to apply classroom learning to practical life experiences.

Approximately 40 percent of the Chapter 1 teachers (N=57) in self-contained classes who replied to the questionnaire stated that 80 percent or more of their students enjoyed the experiences. The average estimate given by these teachers was that 55 percent of their students enjoyed camping to the extent that interest in schoolwork increased.

This question was also asked of non-Chapter 1 teachers who sent their students to Chapter 1 pullout classes. While 31 percent of them (N=179) said that 80 percent or more of their students enjoyed camping, another 45 percent of these teachers indicated that few (20 percent or less) of their students enjoyed the experiences. These teachers estimated, on average, that 47 percent of their students who attended the Chapter 1 camping program gained interest in schoolwork. The overall estimates indicate the stated objective was not met.

Fine Arts - ECIA Chapter 1 teachers in self-contained programs and non-Chapter 1 teachers who sent students to Chapter 1 pullout programs rated the effectiveness of the Urban Gateways Arts for Learning residencies. Self-contained classroom teachers reported, on average, that 70 percent of their students enjoyed these enrichment experiences, and 68 percent of their students increased their interest in schoolwork because of Urban Gateways classroom activities. Non-Chapter 1 teachers estimated that 63 percent of their students benefited from enrichment experiences, and 60 percent of these students increased their interest in schoolwork. The stated objective was not met.

11. *At least 80 percent of the students will attend the program on at least 90 percent of the scheduled school days. [BOAST Evaluation Form, teacher surveys]*

Attendance data were reported for students enrolled at four of the five BOAST schools. The records indicated that 59 percent of the BOAST students attended 90 percent or more of the time. The stated objective was not met.

To improve the student's vocational skills:

12. *At least 50 percent of the students will receive ratings of "good" or better on the quality of their vocational work. [BOAST Evaluation Form]*

This objective for the BOAST program addressed vocational skills acquisition. The letter grades assigned by the class teachers were used to determine students' quality of work, with A, B, or C denoting "good" or better. (It must be noted that the letter grade could represent more than just vocational work.) The number of students who received a letter grade of "C" or better was 71 percent, well in excess of the 50 percent anticipated. The stated objective was met.

To improve the student's health:

13. *All students found to have health problems will be referred for appropriate treatment. [Health team records]*

An analysis of the health services records indicated that of the students who were given physical examinations and were found to have health problems, 70 percent were referred for follow-up treatment. An analysis of the health services provided to students showed that 141 students (36 percent of those examined) were found to have medical problems. Among these students, a total of 174 medical problems were diagnosed. Referrals for follow-up services were made for 98 (70 percent) of these students.

To improve the participation and involvement of parents:

14. *At least 80 percent of the teachers whose students were served by the school-community representatives will report increased awareness of the home situations and instructional needs of their students. [Teacher questionnaires]*

Questionnaire responses from 182 Chapter 1 teachers of self-contained classes and 394 non-Chapter 1 teachers who sent students to Chapter 1 classes assessed the services of school-community representatives (SCRs). Approximately 87 percent of the Chapter 1 teachers and 75 percent of the non-Chapter 1 teachers agreed that they had gained in understanding of their students' home situations. Approximately 87 percent of the Chapter 1 teachers and 82 percent of the non-Chapter 1 teachers agreed that, through the efforts of the SCRs, they had become more aware of their students' instructional needs. Overall, 81 percent of the teachers agreed with the statements. The objective was met.

15. *At least 80 percent of the eligible parents will participate in the required number of sessions in a manner consistent with program guidelines. [Teacher and parent questionnaires]*

Parent Involvement - According to a teacher questionnaire, 93 percent of the eligible parents receiving stipends participated in the required number of sessions. The objective was met.

16. *Of the parents receiving services, 80 percent will report increased knowledge of their children's needs and improved ability to help their children with school learning. [Parent questionnaires]*

Parent Involvement - According to teacher questionnaires, more than 80 percent of the eligible parents were able to help their children with school learning. The objective was met.

Family Guidance Center - Questionnaires returned by 93 percent to 100 percent of the parents who completed counselling sessions during school years 1987 through 1989 indicated that the Family Guidance Center (FGC) helped them understand their child's needs. Although parents were not specifically asked if they had improved in their ability to help their children with school learning, from 84 percent to 92 percent said that the FGC generally helped the family. The objective was met.

17. *At least 80 percent of the participating parents will gain an improved understanding of the planning, implementation and evaluation of Chicago's ECIA Chapter 1 project. [Parent questionnaires]*

Parent Involvement - According to parent questionnaires, almost 90 percent of the parents had gained an increased understanding of the ECIA Chapter 1 project. The stated objective was met.

To improve the skills of the teaching staff:

18. *At least 80 percent of the participating teachers will report that the ECIA Chapter 1 staff development inservice sessions they attended improved their classroom instruction and procedures. [Teacher questionnaire]*

Questionnaire responses from 431 Chapter 1 teachers of self-contained and pullout classes were surveyed to ascertain the quality of inservice training. More than 83 percent of the teachers agreed or strongly agreed with the statement that Chapter 1 inservice training improved their instruction and procedures. The objective was met.

To complete high school successfully:

19. *At least 75 percent of the students participating in the program for a semester or more will attain a credit in English or mathematics, as appropriate. [Student Enrollment Form, course records]*

Data from school year 1989 reflect a level of achievement similar to what has been noted since 1984, the first year of implementation. In the Language Arts Learning Centers, 57 percent of the students passed all English courses the first semester, and 67 percent passed all English courses the second semester. In the Mathematics Learning Centers, 48 percent of the students passed all mathematics courses the first semester, and 56 percent passed all mathematics courses the second semester. The stated objective was not met.

20. *At least 85 percent of the students will complete the academic year and, with the exception of high school graduates, will reenroll in high school the subsequent fall. [Student Enrollment Form, Student Master File]*

Approximately 80 percent of the Language Arts Learning Center students reenrolled the following year, 5 percent transferred, 1 percent graduated, and 14 percent dropped out. Approximately 79 percent of the Mathematics Learning Center students reenrolled the following year, 5 percent transferred, 1 percent graduated, and 15 percent dropped out. The combination of students who reenrolled or transferred to other schools was sufficient to meet the objective.

B.

SUPPLEMENTARY INSTRUCTIONAL APPROACHES

ELEMENTARY SCHOOL ACHIEVEMENT

Prepared by Nancy I. Hiestand

Elementary school achievement in the Chicago Public Schools' Chapter 1 project in fiscal 1989, the 1988-89 school year, is analyzed in this section of the report. Achievement tests are important measures of Chapter 1 student and program success. They are given annually in the Chicago Public Schools. Nearly all elementary students take the *Iowa Tests of Basic Skills* (ITBS), a nationally standardized, norm-referenced test which permits comparisons between a student's achievement and that of a national sample of students in the same grade.

ITBS scores are reported on several subtests and scales. Chapter 1 elementary achievement at the end of fiscal 1989 was measured by scores on the ITBS Reading subtest and on Mathematics Total (a composite of scores on the Computation, Problem-Solving, and Concepts mathematics subtests). These scores were compared student-by-student to the previous year's scores. Overall results include the following:

- The goal for reading improvement of two Normal Curve Equivalent units (NCEs) overall was met by a quarter of the schools; the average was less than a third of an NCE of growth per school. The goal for 60 percent of the students in an individual school to make gains was reached by 14 percent of the schools. Of the almost 25,000 students for whom pre- and posttest scores were available, about half of them showed a positive NCE gain in reading.

- Mathematics achievement in the fiscal 1989 Chapter 1 program was calculated the same way as for reading. The average NCE gain for elementary students in Chapter 1 mathematics programs was 0.2 NCE units, less than the two NCEs anticipated by the objective. Mathematics Total composite scores for about 15,000 students receiving Chapter 1 mathematics instruction indicate that 49 percent improved in mathematics from 1988 to 1989, not the 60 percent anticipated in the objective.

- Reading and mathematics gains at three instructional time levels in small, medium, and large classes were examined for different types of programs. The data suggest that greater reading achievement is associated with longer instructional time in Reading Pullouts, and that greater mathematics achievement is associated with smaller class size in Mathematics Pullouts. Relationships between class time, class size and achievement are inconclusive for Reading/Mathematics Pullouts, though the overall percentage of students making mathematics gains was higher in the Mathematics Pullouts than in the Reading/ Mathematics combination.

The following recommendations are suggested by the data:

- Continue to provide Chapter 1 remedial instruction to Chicago Public Schools because of evident need.

- Examine the program choices and other characteristics of higher-performing Chapter 1 schools to ascertain those aspects that could be adopted by other schools.

- Schedule sufficient time for Reading Pullout programs (data trends associate higher reading achievement with longer instructional time).

- Expect that more Chapter 1 students will gain in mathematics from a Mathematics Pullout program than from the combination Reading/Mathematics Pullout program.

Reading Achievement

Performance Objectives

Formal objectives for reading improvement in all grades were stated in the Chicago Public Schools' application for ECIA Chapter 1 funds submitted for fiscal 1989. Two objectives set goals for improvements in reading in each Chapter 1 school as a whole. Other achievement objectives set goals for student improvement overall. Only the results for elementary school students are reported here.

The tables in this report generally present results as medians or gains in Normal Curve Equivalents (NCEs). This is an equal-interval scale, mandated by the state and federal reporting systems, which allows for more accurate calculation of gains than either grade equivalents or percentiles (other frequently reported scales). NCEs have a range of 1 to 99, with 50 being the national average. An NCE gain of zero indicates that, while growth has taken place from pretest to posttest, relative position or rank has not changed or improved. A positive NCE indicates improvement from previous level.

For schools, accomplishment of the reading objectives was measured in gains on the Reading subtest of the ITBS. Scores on the posttest, given in spring 1989, were compared, student by student, with scores on the pretest given in spring 1988. The difference between these scores is the gain. The median, or score of the middle-ranking student, is reported. Using the composite reading scores calculated from all the Chapter 1 students' scores in each Chapter 1 school, the entire set of Chapter 1 schools was ranked on the basis of greatest to least gain. This ranking identified which schools had reached the goal of gaining two NCEs overall in reading and indicated how many schools obtained various levels of gain (see Table 1.1).

Performance Objective 1 stated:

> *At each participating school, the average gain in reading comprehension for students who received ECIA Chapter 1 instruction in reading, were enrolled in second grade through high school, and were not placed in bilingual instructional categories A or B, will be at least two Normal Curve Equivalent (NCE) units.*

Table 1.1 indicates that Objective 1 was met in 25 percent of the schools; in 64 of the 257 Chapter 1 elementary schools the average (median) gain in reading was 2.0 NCEs or more. The cumulative percent column also indicates that 11 percent of the schools gained 4.0 NCEs or more, and 17 percent gained 3.0 NCEs or more. Overall, Objective 1 was not met.

A positive gain in reading was registered overall by 53 percent of the schools. Three schools (1 percent) showed an NCE gain of zero (no change). Negative statistics signify that a school's average NCE was lower in 1989 than it had been the previous year. Losses of up to two NCEs were registered by 69 schools (27 percent) and 49 schools (19 percent) lost more than two NCEs (-2.0 to -5.0 or less).

TABLE 1.1
Distribution of Chapter 1 Reading Gains by Schools

Median NCE Gain	Elementary Schools N	%	Cumulative %
5.0 +	22	9	9
4.0 to 4.9	5	2	11
3.0 to 3.9	16	6	17
2.0 to 2.9	21	8	25
1.0 to 1.9	29	11	36
.1 to .9	43	17	53
0	3	1	54
-.1 to -.9	36	14	68
-1.0 to -1.9	33	13	81
-2.0 to -2.9	17	7	88
-3.0 to -3.9	11	4	92
-4.0 to -4.9	7	3	95
-5.0 or less	14	5	100
Total	257	100%	

Performance Objective 2 stated:

> *At each participating school, at least 60 percent of the students who received ECIA Chapter 1 instruction in reading, were enrolled in second grade through high school, and were not placed in bilingual instructional categories A or B, will improve their NCEs in reading comprehension from pre- to posttest.*

Table 1.2 indicates that only 35 (14 percent) of the Chapter 1 schools met the objective for improvement in reading. In 122 schools (47 percent) half or more of the students made NCE gains. The goal for every school to reach the standard set in Objective 2 was not met.

TABLE 1.2
Distribution of Chapter 1 Schools by Median Percent of Students Making NCE Gains in ITBS Reading from 1988 to 1989

Percent of Students Making NCE Gains % Range	Elementary Schools N	%
80+	1	0.4
70-79	6	2
60-69	28	11
50-59	87	34
40-49	91	35
30-39	36	14
20-29	7	3
<20	1	0.4
	257	100%

Objective 3 applied only to kindergarten and preschool and is assessed in a separate report.

Performance Objective 4 for reading stated:

> *The average gain in reading comprehension for students enrolled in grade two through high school and not placed in bilingual instructional categories A or B will be at least two NCE units.*

The average NCE gain in reading from 1988 to 1989 for students in 257 Chapter 1 elementary schools was 0.31. Three-tenths of a point of gain represents a slight improvement overall from the pretest level (zero would have meant no change), but the result falls short of the anticipated gain of two NCEs.

Performance Objective 5 for reading stated:

> *At least 60 percent of students enrolled in grades two through high school and not placed in bilingual instructional categories A or B will improve their NCEs in reading comprehension from pre- to posttest.*

Test scores for 24,786 Chapter 1 elementary students with pretest and posttest scores, who participated in a Chapter 1 reading program at least eight months, were analyzed. Table 2 indicates that almost half (49.8 percent) of the students made positive gains in reading, with the upper grades making the greatest gains. The median posttest score for all students (31.7) is up a fraction from the pretest median. For comparison, an NCE of 31 is approximately 19 on the percentile ranking scale and within the third stanine on the nine-point stanine scale. It should be noted that the totals of all students shown in Table 2 and in other tables that follow include a few students whose grade is not known. The pre-NCE and post-NCE columns give the median NCE for the grade and overall.

TABLE 2
Overall Reading Achievement in ECIA Chapter 1 - Fiscal 1989

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	2,940	37.2	34.2	41.3
3	3,854	33.1	31.2	42.4
4	4,188	30.7	30.2	46.2
5	4,441	29.5	30.5	50.6
6	4,149	29.1	30.1	50.9
7	2,750	29.9	34.5	65.0*
8	2,429	30.8	33.8	58.0
All	24,786	31.3	31.7	49.8

*Met 60% objective.

Source: Reading subtest, *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

The goal for reading improvement of two NCEs overall was met by only a quarter of the schools with an average of less than a third of an NCE of growth per school. The goal of 60 percent of the students in an individual school to make gains was met by only a limited number of schools (14 percent of them). Of the 25,000 students with pre- and posttest scores reported, approximately half of them showed a gain; the other half lost ground.

The nature of these results, coupled with the nationwide requirement for schools to show evidence of improvement embodied in the reauthorization of Chapter 1 funding, has led, in the fiscal 1990 school year, to the requirement that nearly all Chapter 1 schools develop Program Improvement Plans which adjust the local program in the hope that greater improvement will take place.

Reading Achievement by Instructional Approach

Three supplemental reading instructional approaches (programs) were offered in Chapter 1: Reading Pullout, Reading/Mathematics Pullout, and Self-Contained Program. Tables 3, 4, and 5 contain overall achievement results for students in each type. Data in the pre-NCE and post-NCE columns are medians. It should be noted that "All" may include, in addition to the grades shown, some students for whom the grade is unknown.

In Reading Pullouts overall, 50.5 percent of the students made gains in reading. In the Self-Contained Program overall, 50.0 percent gained, and in Reading/Mathematics Pullouts, 49.5 percent gained in reading.

The grade-by-grade results for reading allow for greater differentiation among the three instructional approaches than the overall results alone. At every grade, the percent of students with gains in reading was highest in the Self-Contained Program. Reading Pullout gains, while lower than in the Self-Contained Program, were better than in Reading/Mathematics Pullouts in four grades and equal to those in the Reading/Mathematics Pullouts in three other grades (see Tables 3, 4, and 5).

TABLE 3
Reading Achievement in Reading Pullout Classes

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	1,043	37.6	34.9	42.3
3	1,762	34.2	32.4	42.2
4	2,096	32.5	31.4	44.0
5	2,178	30.2	31.0	49.7
6	2,140	29.9	31.0	51.2
7	1,519	29.8	35.0	66.8*
8	1,260	31.4	35.1	60.5*
All	12,007	31.9	32.5	50.5

TABLE 4
Reading Achievement in Reading/Mathematics Pullout Classes

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	562	40.7	34.9	33.1
3	868	34.6	32.1	42.2
4	1,047	32.9	30.9	42.6
5	1,331	31.1	31.6	49.7
6	1,333	29.6	30.6	51.1
7	1,111	30.4	34.3	63.1*
8	885	32.2	34.5	55.7
All	7,144	32.3	32.4	49.5

TABLE 5
Reading Achievement in Self-Contained Classes (15-16 Students or Half Regular Class Size)

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
1	17	30.6	34.9	52.9
2	1,285	35.0	33.4	45.1
3	1,236	29.7	28.8	44.7
4	1,043	25.1	27.7	55.1
5	916	25.2	27.4	55.0
6	610	24.8	25.8	50.2
7	57	24.4	28.5	70.2*
8	133	26.0	31.6	63.9*
All	5,298	28.6	29.2	50.0

*Met 60% objective.

Source: Reading subtest, *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

Reading Achievement by Instructional Approach, Class Size, and Instructional Time

Schools largely determined for themselves the amount of time to devote to Chapter 1 instruction both daily and weekly, within the guidelines. They also established class size based on local needs and resources. Comparisons of achievement gains at different enrollment levels and instructional times were made to answer the following: (1) How do the different classroom organizational patterns affect the percentage of students making achievement gains in reading? and (2) Which patterns seem to promote the greatest gains?

Definitions

The following definitions are used in this report:

Reading gains. The percentage of students with improved Normal Curve Equivalent (NCE) ranks from the pretest taken in spring 1988 to the posttest taken in spring 1989. These are termed "matched scores" on the Reading subtest of the *Iowa Tests of Basic Skills* (ITBS).

Small class size. Enrollment of 1-10 students per class.

Medium class size. Enrollment of 11-18 students per class.

Large class size. Enrollment of 19 students or more per class.

Shorter instructional time. Less than 150 minutes per week.

Average instructional time. From 150-210 minutes per week.

Longer instructional time. More than 210 minutes per week.

Pullout program. Students leave their regular classroom to receive supplementary, remedial instruction in reading and/or mathematics or other subjects.

Self-Contained Program (also known as **Augmented Staffing**). A group of approximately 15-16 students (half the usual number), in grades one through eight, spends the entire day with one teacher.

Results

Table 6 shows the percentage of students with improved NCE rank in reading under nine various conditions of smaller or larger class size and shorter or longer instructional time. The test scores of only those Chapter 1 students who participated eight months or more during the 1988-89 school year are included. The instructional time per week and the class size in pullout programs was listed by the teacher on the *Student Enrollment Form*. The amount of time in the self-contained program was estimated at 210 minutes or more per week because the opportunity for extending the reading time beyond 40 minutes per day was nearly always available.

TABLE 6
Percent of Students Overall with Improved NCE Rank in Reading by Type of Program, Size of Class, and Minutes of Chapter 1 Instruction per Week

Shorter Instructional Time (less than 150 minutes)

Program	(1-10) Small Class	(11-18) Medium Class Size	(19+) Large Class
	%	%	%
Reading Pullout	31.2	43.3	44.7
Reading/Math Pullout	51.1	51.0	-

Average Instructional Time (150-210 minutes)

Program	(1-10) Small Class	(11-18) Medium Class Size	(19+) Large Class
	%	%	%
Reading Pullout	49.6	50.8	51.7
Reading/Math Pullout	49.6	49.1	47.4

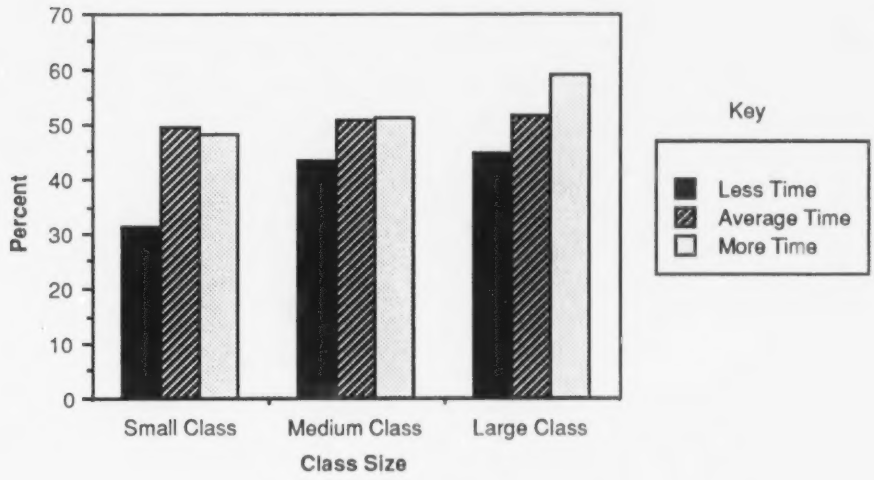
Longer Instructional Time (more than 210 minutes)

Program	(1-10) Small Class	(11-18) Medium Class Size	(19+) Large Class
	%	%	%
Reading Pullout	48.2	51.2	59.3
Reading/Math Pullout	42.1	53.3	56.6
Self-Contained (time estimated)	-	50.0	-

In reading, the highest percentage of students making gains was found in programs with the largest class size and the most time spent in Chapter 1 instruction (59.3 percent). The lowest level of gain was found in the smallest classes which spent the least amount of time in instruction (31.2 percent). Note that this figure is based on 141 students, a relatively small number.

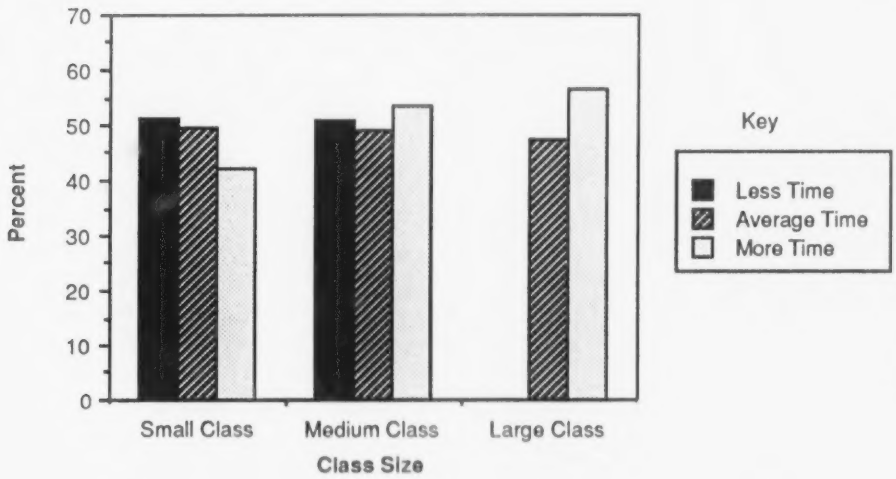
Figure 1 represents the percentage of students making NCE reading gains at three instructional time levels, in small, medium, and large Reading Pullout classes. When Chapter 1 instructional time was shorter, the percentage of students making gains was lower across all class sizes (note the shortest bars). Except in the large classes, spending the most time, the percentage of students making reading gains was about equal, 49-51 percent.

Figure 1. Reading Achievement in Reading Pullout Classes



For Reading/Mathematics Pullout classes, reading gains were also highest in the largest classes spending the most time (56 percent) on instruction. Class size made little difference in reading gains when Chapter 1 instructional time was about average or shorter. When instructional time for reading was longer, the gains increased as class size increased. (See Figure 2.) Data were not sufficient in the large class/less time condition so that bar is omitted from Figure 2.

Figure 2. Reading Achievement in Reading/Math Pullout Classes



Overall reading gains in the Self-Contained Program were reported for comparison with pullout results. About 50 percent of the students overall in the Self-Contained Program made positive NCE gains in reading, less than what was accomplished by Reading Pullout or Reading/Mathematics Pullout students in the same condition (estimating reading instruction at 210 minutes or more per week and a medium class size). (See Table 6.)

Table 6 and Figures 1 and 2 summarize the grade-by-grade reading data and numbers of students in each program type found in Tables 7 - 12 at the end of this section.

Mathematics Achievement

Mathematics achievement in the fiscal 1989 Chapter 1 elementary program was calculated in the same way as for reading. Pretest and posttest scores were compared for all students whose scores could be matched; the difference, expressed in NCE units, is the gain.

Performance Objectives

Objective 6 for mathematics stated:

> *The average gain in mathematics for students enrolled in grades two through high school will be at least two NCE units.*

The average NCE gain for elementary students in Chapter 1 mathematics programs was 0.2 NCE units, less than the two NCEs anticipated by the objective.

Objective 7 for mathematics stated:

> *At least 60 percent of students enrolled in grades two through high school will improve their NCEs in mathematics from pre- to posttest.*

Overall achievement in mathematics was determined by the Mathematics Total composite scores. Those results appear in Table 13.1. The pre-NCE and post-NCE columns show the median score for each particular grade and overall. Test scores for 15,043 students receiving Chapter 1 mathematics instruction indicate that 49.3 percent improved in mathematics from 1988 to 1989. About half of the students, not the 60 percent anticipated in the objective, made the gain.

TABLE 13.1
Overall Mathematics Achievement in ECIA Chapter 1 - Fiscal 1989

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	1,067	43.9	39.0	39.1
3	2,545	34.8	33.5	45.8
4	2,757	32.5	33.0	48.0
5	2,759	33.5	34.0	48.6
6	2,621	32.9	33.4	49.1
7	1,711	32.8	36.2	58.0
8	1,574	32.8	35.7	56.5
All	15,043	34.0	34.4	49.3

Source: Mathematics Total (a composite of Concepts, Problem Solving, and Computation subtests), *Iowa Tests of Basic Skills* given spring 1988 and spring 1989 in the Chicago Public Schools. Eight-month Chapter 1 participants only.

The overall results on the subtests that make up the composite Mathematics Total appear in Tables 13.2, 13.3, and 13.4. Although almost half the students made gains on each subtest, gains were slightly higher on "Concepts" (50.8 percent) and lower on "Problem Solving" (48.0 percent). Pre- and posttest scores were highest on "Computation" (NCE medians of 39.3 and 39.6, respectively).

TABLE 13.2
Overall Mathematics Concepts Achievement in ECIA Chapter 1 - Fiscal 1989

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	1,099	40.9	39.3	45.8
3	2,579	35.0	32.8	44.7
4	2,774	31.4	33.7	54.7
5	2,957	34.3	35.9	52.0
6	2,812	34.4	35.9	52.7
7	1,736	34.8	35.3	49.4
8	1,586	32.2	34.5	53.8
All	15,552	34.2	35.0	50.8

Source: Mathematics Concepts subtest, *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 13.3
Overall Mathematics Problem-Solving Achievement in ECIA Chapter 1 - Fiscal 1989

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	1,098	44.4	39.2	38.3
3	2,577	36.7	34.0	43.2
4	2,772	33.4	32.2	45.5
5	2,958	33.4	32.7	43.2
6	2,815	32.3	31.5	46.3
7	1,737	30.4	36.5	66.4*
8	1,589	33.7	37.3	59.2
All	15,555	34.2	33.9	48.0

*Met 60% objective.

Source: Mathematics Problem Solving subtest, *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 13.4
Overall Mathematics Computation Achievement in ECIA Chapter 1 - Fiscal 1989

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	1,093	48.8	43.2	38.1
3	2,569	38.7	38.8	47.3
4	2,706	38.1	38.7	50.2
5	2,766	38.9	39.8	48.2
6	2,629	38.2	38.7	49.8
7	1,719	38.9	41.7	57.2
8	1,584	38.5	38.8	48.2
All	15,135	39.3	39.6	49.0

Source: Mathematics Computation subtest, *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

The distribution of Chapter 1 schools at various levels of performance on Mathematics Total is shown in Tables 14.1 and 14.2. These tables are in the same format as Tables 1.1 and 1.2 for reading. The average NCE gain in 69 of the 216 schools (32 percent of the schools) with Chapter 1 mathematics programs was 2.0 NCEs or more. The median gain in approximately 56 percent of the schools was positive. (See cumulative percentage column in Table 14.1.)

TABLE 14.1
Distribution of Chapter 1 Mathematics Gains by Schools

Median NCE Gain	Elementary Schools N	Elementary Schools %	Cumulative %
5.0 +	21	10	10
4.0 to 4.9	11	5	15
3.0 to 3.9	14	6	21
2.0 to 2.9	23	11	32
1.0 to 1.9	24	11	43
.1 to .9	28	13	56
-.1 to -.9	15	7	63
-1.0 to -1.9	27	12	75
-2.0 to -2.9	10	5	80
-3.0 to -3.9	16	7	87
-4.0 to -4.9	8	4	91
-5.0 or less	19	9	100
Total	216	100%	

In 42 schools, 60 percent or more of the students made NCE gains in Mathematics Total (see Table 14.2).

TABLE 14.2
Distribution of Chapter 1 Schools by Median Percent of Students Making NCE Gains in ITBS Mathematics Total from 1988 to 1989.

Percent of Students Making NCE Gains % Range	Elementary Schools N	%
80+	4	2
70-79	10	5
60-69	28	13
50-59	65	30
40-49	66	30
30-39	26	12
20-29	13	6
<20	4	2
	216	100%

Approximately half of the Chapter 1 students in mathematics programs made gains on Mathematics Total, doing best on the Concepts subtest and less well on Problem Solving. The percentages of students making gains in the higher grades came closest to the objective of 60 percent of the students showing gain. Yet, the overall student gain of 0.2 was short of the two NCEs anticipated in the performance objective.

Mathematics Achievement by Instructional Approach

In Chapter 1 schools, mathematics instruction was offered in Mathematics Pullout, Reading/Mathematics Pullout and Self-Contained programs. Tables 15, 16, and 17 give the overall results for each type of program.

TABLE 15
Mathematics Achievement in Mathematics Pullout Classes

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	45	43.1	37.7	24.4
3	388	33.7	33.6	47.9
4	614	31.0	33.7	54.4
5	549	32.5	33.8	52.8
6	708	32.9	34.5	51.6
7	448	29.4	33.7	61.8*
8	304	32.7	35.6	61.2*
All	3,057	32.2	34.1	53.9

* Met 60% objective.

TABLE 16
Mathematics Achievement in Reading/Mathematics Pullout Classes

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	301	46.3	38.6	33.9
3	853	36.6	35.5	47.1
4	1,041	35.8	35.1	45.8
5	1,238	36.1	35.7	45.3
6	1,240	34.4	34.5	48.5
7	1,088	34.5	37.7	57.5
8	877	35.6	38.3	57.4
All	6,641	35.9	36.2	49.3

TABLE 17
Mathematics Achievement in Self-Contained Classes (15-16 Students or Half Regular Class Size)

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	621	42.4	39.5	42.7
3	1,177	33.0	31.5	45.7
4	1,035	29.1	29.8	48.3
5	863	29.9	31.5	51.7
6	576	29.9	29.5	47.4
7	57	26.8	31.7	63.2*
8	133	27.1	35.9	69.9*
All	4,467	32.1	32.1	48.2

*Met 60% objective.

Source: Mathematics Total (a composite of Concepts, Problem Solving, and Computation subtests), *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month chapter 1 participants only.

Mathematics achievement (on the composite Mathematics Total of the ITBS) was highest in the Mathematics Pullouts where 53.9 percent of the students made NCE gains. Slightly less than half the students in the Reading/Mathematics Pullouts or Self-Contained classes made gains (49.3 percent and 48.2 percent, respectively).

The grade-by-grade mathematics results for the three instructional approaches were also examined (see Tables 15, 16, and 17). It was found that the percentages of students making gains in the Mathematics Pullouts were higher in four grades than in the other program types. Mathematics gains in Reading/Mathematics Pullouts were lower than in the other two approaches in five grades.

Mathematics Achievement by Instructional Approach, Class Size, and Instructional Time

Mathematics achievement varied by instructional approach (program type), class size, and weekly instructional time. The differences are explored in this section of the report. Questions guiding analysis include the following: (1) How do the different organizational patterns impact mathematics gains? and (2) Which patterns seem to promote the greater gains?

Definitions

All the definitions in this section are the same as those for the analysis of reading achievement, with the following exception:

> **Mathematics gains.** The percentage of students with improved Normal Curve Equivalent (NCE) ranks from the pretest in spring 1988 to the posttest in spring 1989. The Mathematics Total scores (a composite of the Concepts, Computation, and Problem Solving subtests) were analyzed.

Results

Table 18 makes the same type of comparisons as Table 6. It shows the percentage of students making positive mathematics gains by program, instructional time, and class size. In small class Mathematics Pullouts, 54 percent to 55 percent of the students made gains in all instructional times. Similar gains were made in medium size Mathematics Pullout classes of average instructional time. Gains were somewhat lower in Reading/Mathematics Pullout at average instructional time. Results were mixed in the longer instructional time category. In the other patterns, small sample size limited conclusions (see Tables 19-24).

TABLE 18
Percent of Students Overall with Improved NCE Rank in Mathematics by Program, Class Size, and Minutes of Chapter 1 Instruction per Week

Shorter Instructional Time (less than 150 minutes)

Program	(1-10) Small Class	(11-18) Medium Class Size	(19+) Large Class
	%	%	%
Math Pullout	54.6	-	-
Reading/Math Pullout	45.6	54.4	-

Average Instructional Time (150-210 minutes)

Program	(1-10) Small Class	(11-18) Medium Class Size	(19+) Large Class
	%	%	%
Math Pullout	55.3	54.9	49.6
Reading/Math Pullout	49.2	48.7	48.3

Longer Instructional Time (more than 210 minutes)

Program	(1-10) Small Class	(11-18) Medium Class Size	(19+) Large Class
	%	%	%
Math Pullout	54.4	47.3	-
Reading/Math Pullout	40.3	53.7	51.7
Self-Contained (time estimated)		48.2	

Figure 3. Math Achievement in Math Pullout Classes

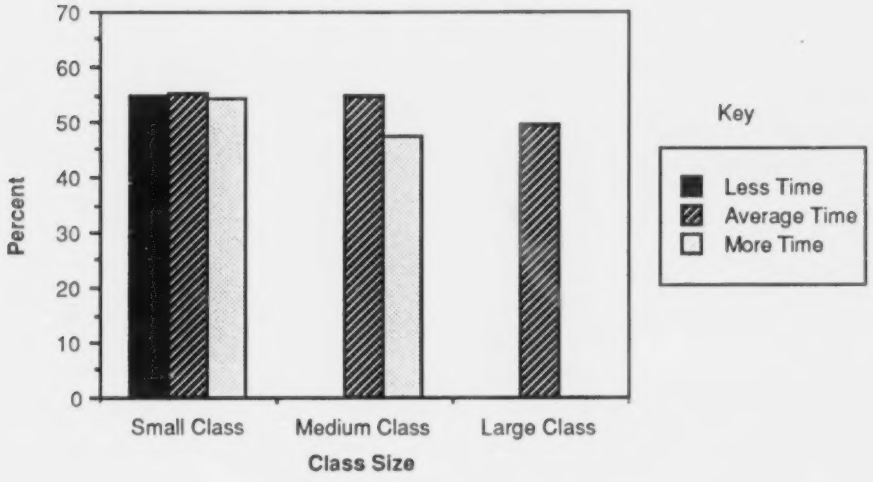


Figure 4. Math Achievement in Reading/Math Pullout Classes

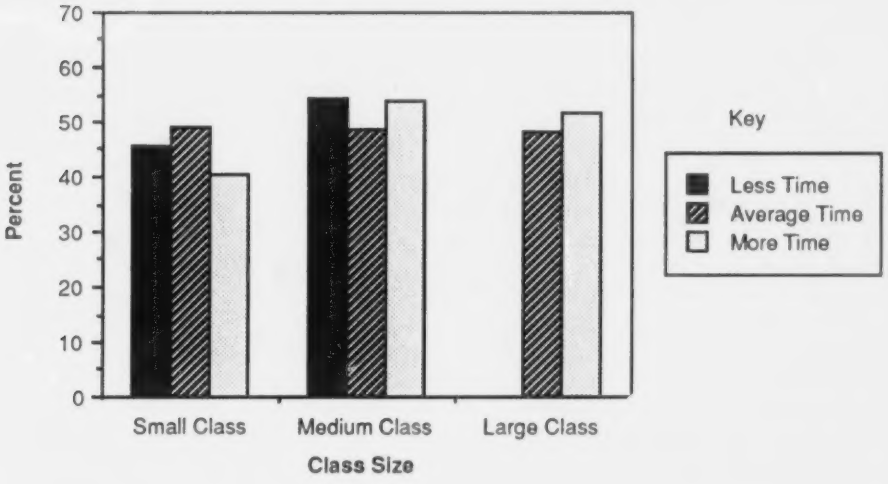


Table 18 and Figures 3 and 4 summarize the grade-by-grade mathematics data in Tables 19-24 which are found at the end of the section. Bars were omitted from the figures when sample size was small or missing.

Summary

Achievement tests are important measures of Chapter 1 student and program success. Each year, nearly all elementary school students in the Chicago Public Schools take the *Iowa Tests of Basic Skills* (ITBS). High school students are given the *Tests of Achievement and Proficiency* (TAP). These are nationally standardized, norm-referenced tests which permit comparisons between a student's achievement and that of a national sample of students in the same grade. Elementary school achievement is summarized in this report.

The goal for reading improvement of two NCEs overall was met by only a quarter of the schools, with the average less than a third of an NCE of growth per school. The goal of 60 percent of the students in an individual school to make gains was also met by only a limited number of schools (14 percent of them). Among the almost 25,000 students, it was found that just about half of them showed a gain; others lost some ground.

Reading gains at three time levels in small, medium, and large classes were examined. In Reading Pullout classes, when Chapter 1 instructional time was shorter, the percentage of students making gains was lower in all class sizes. For Reading/Mathematics Pullout classes, class size made little difference in reading gains when Chapter 1 instructional time was about average or shorter. About 50 percent of the students in the Self-Contained program made positive NCE gains in reading overall, less than was accomplished by Reading Pullout students (50.5 percent) but slightly more than was gained by Reading/Mathematics Pullout students (49.5 percent). Self-Contained Program gains ranked higher than the other approaches in the grade-by-grade comparison.

Mathematics achievement in the fiscal 1989 Chapter 1 program was calculated in the same way as for reading. The average NCE gain for elementary students in Chapter 1 mathematics programs was 0.2 NCE units, less than the two NCEs anticipated by the objective. Mathematics Total composite scores for about 15,000 students receiving Chapter 1 mathematics instruction indicate that 49 percent improved in mathematics from 1988 to 1989, not the 60 percent anticipated in the objective.

Gains were slightly higher on the Concepts subtest (51 percent) and lower on Problem Solving (48 percent). Pre- and posttest scores were highest on Computation (NCE of 39).

Mathematics achievement (on the composite Mathematics Total of the ITBS) was highest overall in the Mathematics Pullouts where 54 percent of the students made NCE gains. Less than half the students in the Reading/Mathematics Pullouts or Self-Contained classes made gains (49 percent and 48 percent, respectively). The grade-by-grade comparison also gave the advantage to Mathematics Pullouts over the other instructional approaches.

In small Mathematics Pullout classes, 54 percent to 55 percent of the students made gains throughout all instructional times. Similar gains were made in medium-sized classes at average instructional time. Gains were somewhat lower within the other instructional approach/time patterns, although conclusions are limited by small sample size.

Conclusions

Test results point to the continued need of Chicago public elementary school students for the remedial help provided by Chapter 1. The children who participated in 1988-89 were already at risk of failure, as shown by their low pretest scores in reading and mathematics. To Chapter 1 must be attributed some of the small, but positive, increases in the posttest averages. The achievement results, however, were not sufficient to meet the formal objectives.

There was little difference among the three types of reading programs in the overall percentage of students making NCE gains; about half of them made gains. In each of the program types, more upper grade than lower grade students made gains. When grade-level differences were examined, it was noted that Self-Contained programs had higher percentages of students making reading gains in four grades (fifth, sixth, seventh, and eighth); Reading/Mathematics Pullouts had lower percentages of students making gains than the other types of programs. The overall reading gain was 0.3, less than the objective of two NCEs.

About half the Chapter 1 students in mathematics programs made gains on Mathematics Total, doing best on the Concepts subtest and less well on Problem Solving. The gains of upper grade students came closest to the objective of 60 percent. The overall mathematics gain of 0.2 was short of the two NCEs anticipated in the performance objective.

The nature of these results, coupled with the nationwide requirement for schools to show evidence of improvement led in fiscal 1990 to the requirement that nearly all Chapter 1 schools develop Program Improvement Plans which adjust the local program so that greater growth in Chapter 1 student achievement can be reached.

Recommendations

- Continue to provide Chapter 1 remedial instruction to Chicago public school students.
- Report on the program choices, demographics, and other characteristics of higher-performing Chapter 1 schools to ascertain those aspects that could be adopted by other schools.
- Schedule sufficient time for Reading Pullout programs (data trends associate higher reading achievement with longer instructional time).
- Expect that more Chapter 1 students will gain in mathematics from a Mathematics Pullout program than from the combination of Reading/Mathematics Pullout program.

Tables 7-12 and 19-24

TABLE 7.1
Reading Achievement in Reading Pullout Classes with 1-10 students and Less than 150 minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	39	39.4	35.3	33.3
3	24	28.7	19.9	8.3
4	14	34.1	31.0	28.6
5	40	35.6	33.0	35.0
6	10	30.2	28.8	20.0
7	(Insufficient data)			
8	(Insufficient data)			
All	141	34.3	30.8	31.2

TABLE 7.2
Reading Achievement in Reading Pullout Classes with 1-10 Students and 150-210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	516	37.6	35.9	45.0
3	707	33.9	32.1	42.3
4	532	30.6	30.7	48.7
5	513	30.2	31.7	52.0
6	350	29.1	30.5	49.7
7	301	28.8	34.5	66.1*
8	181	31.3	35.7	59.7
All	3,103	32.1	32.7	49.6

TABLE 7.3
Reading Achievement in Reading Pullout Classes with 1-10 Students and More than 210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	19	39.5	29.9	21.1
3	39	34.4	31.7	35.9
4	71	35.2	34.4	35.2
5	100	33.4	32.9	51.0
6	101	28.9	29.8	51.5
7	36	31.5	35.6	72.2*
8	18	27.4	33.6	72.2*
All	384	32.5	32.4	48.2

*Met 60% objective.

Source: Reading subtest, *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 8.1
Reading Achievement in Reading Pullout Classes with 11-18 Students and Less than 150 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2				
3	49	34.5	30.2	36.7
4	122	29.9	27.1	38.5
5	38	27.0	28.3	50.0
6	39	29.2	28.4	43.6
7	19	30.8	35.1	63.2*
8	22	35.9	35.6	54.5*
All	289	30.7	29.1	43.3

TABLE 8.2
Reading Achievement in Reading Pullout Classes with 11-18 Students and 150-210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	439	37.3	34.0	42.6
3	772	34.7	33.4	43.8
4	1,054	32.7	31.7	44.2
5	1,137	29.9	30.6	49.3
6	1,114	30.2	31.2	51.3
7	697	30.2	35.1	64.7*
8	759	31.4	35.4	60.9*
All	5,978	31.8	32.6	50.8

Table 8.3
Reading Achievement in Reading Pullout Classes with 11-18 Students and More than 210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	36	36.0	32.3	30.6
3	71	35.3	32.6	39.4
4	165	38.1	34.2	33.9
5	121	30.2	31.8	52.1
6	282	30.6	31.7	53.9
7	120	31.0	36.0	68.3*
8	92	32.3	35.8	67.4*
All	887	32.8	33.3	51.2

*Met 60% objective.

Source: Reading subtest, *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 9.1
Reading Achievement in Reading Pullout Classes with 19 or More Students and Less than 150 minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	(Insufficient data)			
3	10	40.3	36.8	40.0
4	(Insufficient data)			
5	11	40.0	42.4	36.4
6	36	35.2	33.9	38.9
7	26	25.6	27.6	61.5*
8	10	21.5	24.2	40.0
All	94	32.2	32.4	44.7

TABLE 9.2
Reading Achievement in Reading Pullout Classes with 19 or More Students and 150-210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	(Insufficient data)			
3	58	27.9	28.2	51.7
4	166	32.8	31.2	40.4
5	199	29.4	29.8	49.2
6	177	28.4	30.6	53.1
7	142	30.8	35.5	66.9*
8	127	32.8	33.7	52.0
All	872	30.5	31.6	51.7

TABLE 9.3

Reading Achievement in Reading Pullout Classes with 19 or More Students and More than 210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	(Insufficient data)			
3	39	38.0	32.7	33.3
4	38	31.1	28.8	47.4
5	47	31.8	31.7	46.8
6	86	29.3	29.5	48.8
7	194	28.8	35.4	72.2*
8	67	28.6	33.6	67.2*
All	790	30.2	33.0	59.3

*Met 60% objective.

Source: Reading subtest, *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 10.1
Reading Achievement in Reading/Mathematics Pullout Classes with 1-10 Students and Less than 150 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	(Insufficient data)			
3	(Insufficient data)			
4	13	48.5	39.7	38.5
5	19	30.2	34.2	52.6
6	18	37.0	36.9	50.0
7	23	30.1	35.4	69.6*
8	19	35.6	35.2	36.8
All	94	35.5	36.3	51.1

TABLE 10.2
Reading Achievement in Reading/Mathematics Pullout Classes with 1-10 Students and 150-210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	196	39.3	34.9	39.3
3	290	35.9	32.9	41.7
4	259	34.1	33.8	45.9
5	301	29.0	30.1	52.5
6	296	27.7	29.0	48.3
7	208	32.1	37.2	65.9*
8	144	31.2	34.5	58.3
All	1,698	32.5	32.7	49.6

TABLE 10.3
Reading Achievement in Reading/Mathematics Pullout Classes with 1-10 or More students and More than 210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	45	43.0	39.7	42.2
3	35	32.3	26.0	31.4
4	13	12.1	14.0	46.2
5	(Insufficient data)			
6	18	28.9	25.9	33.3
7	16	12.8	19.3	68.8*
8	10	21.1	26.1	60.0*
All	140	30.4	28.3	42.1

*Met 60% objective.

Source: Reading subtest, *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 11.1
Reading Achievement in Reading/Mathematics Pullout Classes with 11-18 Students and Less than 150 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	20	50.1	37.9	15.0
3	121	35.4	37.6	57.9
4	15	25.7	19.8	26.7
5	(Insufficient data)			
6	29	34.4	35.8	51.7
7	20	38.1	39.5	60.0*
8	40	33.2	36.3	52.5
All	247	35.7	36.2	51.0

TABLE 11.2
Reading Achievement in Reading/Mathematics Pullout Classes with 11-18 Students and 150-210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	98	34.8	32.3	40.8
3	234	34.5	31.3	43.2
4	467	34.2	30.9	39.2
5	638	31.9	32.2	48.9
6	510	30.2	31.0	52.5
7	386	28.5	32.0	60.9*
8	337	33.0	34.0	51.3
All	2,671	32.0	31.9	49.1

TABLE 11.3
Reading Achievement in Reading/Mathematics Pullout Classes with 11-18 or More Students and More than 210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	14	37.2	30.5	21.4
3	35	26.9	27.8	45.7
4	51	33.2	31.5	43.1
5	69	30.3	29.9	42.0
6	159	31.9	32.6	50.9
7	151	33.4	37.0	59.6
8	92	37.0	41.4	69.6*
All	572	32.9	34.4	53.3

*Met 60% objective.

Source: Reading subtest, *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 12.1 - (Insufficient data)
Reading Achievement in Reading/Mathematics Pullout Classes with 19 or More Students and Less than 150 Minutes of Chapter 1 Instruction per Week

TABLE 12.2
Reading Achievement in Reading/Mathematics Pullout Classes with 19 or More Students and 150-210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	189	42.6	34.2	25.9
3	138	33.6	29.3	29.0
4	178	29.2	27.9	43.8
5	259	32.1	31.9	48.6
6	228	28.3	29.6	51.3
7	282	31.2	34.7	64.2*
8	209	30.6	32.8	53.6
All	1,484	32.3	31.8	47.4

TABLE 12.3
Reading Achievement in Reading/Mathematics Pullout Classes with 19 or More Students and More than 210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	43	47.4	45.1	34.9
3	13	33.3	31.9	53.8
4	59	30.1	31.4	55.9
5	50	29.4	33.1	56.0
6	76	28.1	30.1	56.6
7	25	22.1	29.4	72.0*
8	36	25.0	30.6	75.0*
All	302	30.8	33.1	56.6

*Met 60% objective.

Source: Reading subtest, *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 19.1
Mathematics Achievement in Mathematics Pullout Classes with 1-10 Students and Less than 150 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
3	17	33.4	48.9	94.1*
4	17	44.3	38.3	17.6
5	12	35.9	38.5	50.0
6	30	29.5	24.8	20.0
7	35	18.8	29.5	82.9*
8	30	25.7	30.2	56.7
All	141	28.8	32.8	54.6

TABLE 19.2
Mathematics Achievement in Mathematics Pullout Classes with 1-10 Students and 150-210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	18	42.8	37.6	22.2
3	96	33.0	31.2	45.8
4	131	28.1	31.8	60.3*
5	87	30.5	33.6	58.6
6	103	30.8	34.0	55.3
7	75	28.5	31.9	56.0
8	38	30.5	35.4	68.4*
All	548	30.6	32.8	55.3

TABLE 19.3
Mathematics Achievement in Mathematics Pullout classes with 1-10 or More Students and More than 210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	9	49.1	43.2	33.3
3	27	31.7	28.9	37.0
4	24	23.6	31.6	58.3
5	48	35.6	38.7	60.4*
6	49	26.7	26.9	46.9
7	19	32.0	35.6	63.2*
8	27	32.5	36.8	74.1*
All	204	31.2	33.2	54.4

*Met 60% objective.

Source: Mathematics Total (a composite of Concepts, Problems and Computation subtests), *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 20.1 - (Insufficient data)
Mathematics Achievement in Mathematics Pullout Classes with 11-18 Students and Less than 150 Minutes of Chapter 1 Instruction per Week

TABLE 20.2
Mathematics Achievement in Mathematics Pullout Classes with 11-18 Students and 150-210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	15	43.5	39.3	20.0
3	172	37.7	37.8	51.7
4	395	32.2	34.2	53.7
5	263	32.3	33.5	51.7
6	384	34.1	36.0	53.4
7	265	30.5	34.9	61.5*
8	153	34.8	37.2	62.7*
All	1,645	33.3	35.3	54.9

TABLE 20.3
Mathematics Achievement in Mathematics Pullout Classes with 11-18 Students and More than 210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
3	27	29.8	22.9	22.2
4	10	36.1	50.7	50.0
5	65	33.7	33.7	50.8
6	55	33.7	36.9	54.5
7	37	29.0	30.6	51.4
8	42	32.2	33.1	45.2
All	237	32.4	33.3	47.3

*Met 60% objective.

Source: Mathematics Total (a composite of Concepts, Problem Solving, and Computation subtests), *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 21.1 - (Insufficient data)
Mathematics Achievement in Mathematics Pullout Classes with 19 or More Students and Less than 150 Minutes of Chapter 1 Instruction per Week

TABLE 21.2
Mathematics Achievement in Mathematics Pullout Classes with 19 or More Students and 150-210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
3	50	24.7	26.6	44.0
4	41	28.8	31.7	51.2
5	74	32.2	31.6	47.3
6	72	31.1	32.9	48.6
7	19	35.0	37.0	63.2*
8	16	32.2	34.7	62.5*
All	274	30.4	31.5	49.6

TABLE 21.3 - (Insufficient data)
Mathematics Achievement in Mathematics Pullout Classes with 19 or More Students and More than 210 Minutes of Chapter 1 Instruction per Week

*Met 60% objective.

Source: Mathematics Total (a composite of Concepts, Problem Solving, and Computation subtests), *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 22.1
Mathematics Achievement in Reading/Mathematics Pullout Classes with 1-10 Students and Less than 150 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
4	13	38.4	35.3	30.8
5	17	41.6	37.9	35.3
6	17	30.9	36.2	58.8
7	23	32.5	31.2	43.5
8	19	36.7	40.2	52.6
All	90	35.4	36.0	45.6

TABLE 22.2
Mathematics Achievement in Reading/Mathematics Pullout Classes with 1-10 Students and 150-210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	88	48.8	36.8	25.0
3	285	38.3	37.2	47.4
4	254	38.3	38.3	47.6
5	274	34.3	35.3	49.3
6	273	32.5	33.4	52.0
7	205	37.0	39.9	60.5*
8	143	37.0	37.7	48.3
All	1,523	36.8	36.7	49.2

TABLE 22.3
Mathematics Achievement in Reading/Mathematics Pullout Classes with 1-10 or More Students and More than 210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	26	48.8	45.2	38.5
3	35	41.3	34.9	37.1
4	14	17.4	14.4	35.7
5	(Insufficient data)			
6	17	23.1	22.8	47.1
7	14	20.3	21.3	42.9
8	10	21.0	22.6	60.0*
All	119	33.2	30.2	40.3

*Met 60% objective.

Source: Mathematics Total (a composite of Concepts, Problem Solving, and Computation subtests), *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 23.1
Mathematics Achievement in Reading/Mathematics Pullout Classes with 11-18 Students and Less than 150 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	19	48.8	45.6	36.8
3	117	37.9	41.7	59.0
4	15	24.7	21.3	33.3
5	(Insufficient data)			
6	27	40.4	42.6	55.6
7	21	39.1	45.9	57.1
8	40	39.6	42.8	57.5
All	241	38.5	41.2	54.4

TABLE 23.2
Mathematics Achievement in Reading/Mathematics Pullout Classes with 11-18 Students and 150-210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	62	39.7	40.4	53.2
3	228	36.4	32.8	41.2
4	465	36.0	35.2	45.4
5	611	36.5	36.2	46.5
6	479	34.9	34.0	43.8
7	380	31.3	34.5	56.8
8	333	35.2	37.9	59.8
All	2,559	35.2	35.4	48.7

TABLE 23.3
Mathematics Achievement in Reading/Mathematics Pullout Classes with 11-18 Students and More than 210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	14	47.0	38.0	35.7
3	33	39.1	33.7	27.3
4	51	37.2	35.5	45.1
5	63	38.0	36.7	38.1
6	143	36.6	38.8	60.8*
7	143	36.5	41.7	64.3*
8	92	42.0	44.4	53.3
All	540	38.1	39.6	53.7

*Met 60% objective.

Source: Mathematics Total (a composite of Concepts, Problem Solving, and Computation subtests), *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

TABLE 24.1 - (Insufficient data)
Mathematics Achievement in Reading/Mathematics Pullout Classes with 19 or More Students and Less than 150 Minutes of Chapter 1 Instruction per Week

TABLE 24.2
Mathematics Achievement in Reading/Mathematics Pullout Classes with 19 or More Students and 150-210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	98	46.4	36.2	28.6
3	141	30.3	32.5	54.6
4	178	33.3	32.5	46.1
5	231	36.7	35.0	39.0
6	216	34.4	34.5	46.8
7	277	37.1	39.5	53.4
8	206	32.8	36.5	60.7*
All	1,347	35.4	35.6	48.3

TABLE 24.3
Reading Achievement in Reading/Mathematics Pullout Classes with 19 or More Students and More than 210 Minutes of Chapter 1 Instruction per Week

Grade	N	Pre-NCE	Post-NCE	% of Students With NCE Gain
2	14	49.8	41.1	28.6
3	12	29.0	29.4	58.3
4	59	35.7	35.8	49.2
5	46	32.2	33.5	54.3
6	69	34.8	33.1	42.0
7	25	30.7	34.3	68.0
8	36	31.1	36.5	66.7
All	261	34.2	34.6	51.7

*Met 60% objective.

Source: Mathematics Total (a composite of Concepts, Problem Solving, and Computation subtests), *Iowa Tests of Basic Skills*, given spring 1988 and spring 1989 in Chicago Public Schools. Eight-month Chapter 1 participants only.

INDIVIDUAL SCHOOL REPORT OF ACHIEVEMENT

Prepared by Nancy I. Hiestand

Chapter 1 standardized test achievement reports for fiscal 1989 were distributed to elementary schools in January 1990. The data were presented by classroom, program type, and by school. Copies were prepared for the principal, the local school council chairperson, the district superintendents, and the Department of Grants and Technical Assistance which administers the Chapter 1 program.

This section of the Chapter 1 evaluation report describes the contents of an individual school report, employing an example. The entire set of individual school reports is available for reference in the Department of Research, Evaluation and Planning. Student scores on the *Iowa Tests of Basic Skills* given in spring 1989 and spring 1988 were used in this analysis.

Example of School Program Ranking among Similar Programs

Every Chapter 1 school received its achievement data in the same computer-generated format. Table 1 shows the median gains for the Chapter 1 instructional programs in a sample school in both grade equivalents and normal curve equivalents (NCEs). *Medians* represent the score of the middle student in the group when scores have been ranked from high to low. *Grade equivalents* represent achievement in years (to the left of the decimal point) and months (to the right of the decimal point). *Gain* is the difference between a pretest and a posttest given a year apart. When gain (or change) is given in grade equivalents, it is stated as years and months. NCEs are different; a positive NCE (anything greater than zero) means that a student's score ranks higher now than it did in comparison to the pretest. A negative NCE means that the score this year is lower than last year.

Table 1 indicates that a Reading Pullout (Program 1) was conducted in the sample school. In this type of program, students spend about 30-40 minutes daily in computer-assisted or teacher-directed remedial reading instruction. In the sample school, 49.1 percent of the students in Program 1 had improved their percentile rank in reading from 1988 to 1989. Among 160 schools with similar programs the sample school's Reading Pullout program ranked 83rd,just about in the middle. Median gain scores from all the Chapter 1 schools with Reading Pullout programs are compared to arrive at the Program 1 ranking.

There were 112 students for whom gains could be calculated from pretest and posttest results. The median grade-equivalent gain of 0.8 shown in Table 1 is interpreted as 8 months of gain. The median NCE reading gain for Program 1 shown in Table 1 was 0.0. This indicated that the middle student's NCE score was unchanged this year from last, and that, therefore, about half the group gained more in reading than they did the year before and half gained less.

In contrast, the 13 students in Program 48 (Extended-Day Program) in the sample school showed a median grade-equivalent gain in reading of 1.3 (1 year and 3 months) and a corresponding NCE gain of 9.6. Here, 69.2 percent of the students with pre- and posttest scores had improved their percentile ranks. (Note that only one such program was identified among Chapter 1 schools, and thus it is ranked 1 of 1.)

Program 48 also appears under the ITBS Mathematics Total heading. Parentheses are used around the 9 because the data represented too few students for valid group assessment and should be interpreted with caution.

TABLE 1
1989 ECIA Chapter 1 Achievement Results

TABLE 1

1989 ECIA CHAPTER 1 ACHIEVEMENT RESULTS

Unit:

* This table gives median scores for each instructional *
* Chapter 1 program at the school. It compares these *
* median scores to the medians of other schools using *
* similar programs. *

ITBS Reading Comprehension

Program	Rank among schools operating similar programs	Number with pre- and posttest results	Median grade-equivalent gain	Median NCE gain	Percent of students with improved percentile rank
1	83 of 160	112	0.8	0.0	49.1
48	1 of 1	13	1.3	9.6	69.2
55	5 of 31	35	0.8	2.5	60.0

ITBS Mathematics Total

48*		(9)			22.2

Program descriptors

1 indicates Reading Pullout

48 indicates Extended Day Program

55 indicates Urban Gateways

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* Statistics based on small numbers of students may be poor estimates and should not be used to evaluate groups.

Example of Achievement Summary by Classroom and Overall

The sample school received a separate Table 2 for each of seven Chapter 1 classrooms. The results from two of these classrooms are discussed here. The pre-and posttest median scores are shown for the classrooms of all the students who were tested. The number of students tested appears under the score. Gains are calculated for matched scores. Table 2 for Room 213 shows the test results in Reading and in Mathematics Total. Table 2 does not show gains for the first graders because these students had not taken a pretest. The first grade posttest reading median NCE of 52.6 is just over the national average of 50. Grade 2 enrolled 26 students. The grade-equivalent median gain of 0.8 (8 months) is based on the scores of 24 students with pre-and posttest scores. The NCE Results columns for second grade show a pretest of 30.7, a posttest of 35.1, and an NCE median gain of 1.0. (Recall that this is not a subtraction.) On average, the children in grade 2 had improved 1 NCE unit over last year, and 54.2 percent of them had improved percentile ranks. Grade 3 is asterisked because data for 11 students are not sufficient for a valid assessment. The trend is positive, however, since 72.7 percent of the third graders had improved percentile ranks. Overall, 60.0 percent of 35 students in the Room 213 pullout with valid pre- and posttest scores had improved their percentile ranks.

TABLE 2

1989 ECIA CHAPTER 1 ACHIEVEMENT RESULTS

Unit Room 213

75 students in program 1: Reading Pullout

		ITBS Reading Comprehension Medians						
		Grade-Equivalent			NCE Results			
Grade	Students reported enrolled in Ch. 1	Pre-test	Post test	Gain	Pre-test	Post test	Gain	Percent of students with improved %ile ranks
1		--	1.9	--	--	52.6	--	--
	37	0	36	0	0	36	0	0
2		1.1	1.9	0.8	30.7	35.1	1.0	54.2
	26	24	26	24	24	26	24	24
3*		1.5	2.6		23.5	29.9		72.7
	12	12	11	(11)	12	11	(11)	11
TOTAL				0.8	29.9	41.3	2.5	60.0
	75			35	36	73	35	35

		ITBS Mathematics Total Medians						
		Grade-Equivalent			NCE Results			
Grade	Students reported enrolled in Ch. 1	Pre-test	Post test	Gain	Pre-test	Post test	Gain	Percent of students with improved %ile ranks
1*		--	1.4	--	--	37.1	--	--
	6	0	(6)	0	0	(6)	0	0
2*		1.7	2.3		48.4	37.1		12.5
	13	8	13	(8)	8	13	(8)	8
3*		1.7	3.6		46.8	68.5		100.0
	1	(1)	(1)	(1)	(1)	(1)	(1)	1
TOTAL*					46.8	37.1		22.2
	20			(9)	9	20	(9)	9

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* Statistics based on small numbers of students may be poor estimates and should not be used to evaluate groups.

Table 2 for Room 225 is a report of the reading progress of third, fourth, and fifth graders in a Reading Pullout program with a different teacher. Grade 3 had 22 students in all, but the gains were calculated for 21 students with pre- and posttests. The median grade-equivalent gain in reading was 0.9 or 9 months. The NCE gain was a positive 3.5, and 61.9 percent improved rank. The median gain for grade 4 students was 0.6 or 6 months in grade equivalents. Their median NCE gain was negative:-2.3. These students lost ground in relation to their scores of the previous year. (Note that we are discussing medians, a comparison of middle score with middle score; the change from pretest NCE of 36.5 to posttest NCE of 35.8 is negative though it is not a direct subtraction.) Grade 5 also had a negative median NCE gain. A negative gain indicated that fewer than 50 percent of the students showed improved percentile ranks. Only 40.7 percent of the fifth graders improved their percentile ranks. The overall percent of the 77 students in grades 3,4, and 5 who attended the pullout program in Room 225 and who improved in percentile rank was 44.2.

TABLE 2
1989 ECIA Chapter 1 Achievement Results

TABLE 2

1989 ECIA CHAPTER 1 ACHIEVEMENT RESULTS

Unit Room 225

78 students in program 1: Reading Pullout

		ITBS Reading Comprehension Medians						
		Grade-Equivalent			NCE Results			
Grade	Students reported enrolled in Ch. 1	Pre-test	Post test	Gain	Pre-test	Post test	Gain	Percent of students with improved %ile ranks
3		1.7	2.6	0.9	28.2	31.5	3.5	61.9
	22	21	22	21	21	22	21	21
4		2.9	3.7	0.6	36.5	35.8	-2.3	34.5
	29	29	29	29	29	29	29	29
5		3.7	4.5	0.7	35.8	34.4	-2.3	40.7
	27	27	27	27	27	27	27	27
TOTAL				0.8	35.8	33.0	-0.7	44.2
	78			77	77	78	77	77

Using the Information

The room-by-room test score medians in this report were to be used to pinpoint the grades and areas of instruction that needed upgrading. However, standardized test scores such as these should not be interpreted in isolation. Student attendance, staffing changes, program implementation problems, the regular instructional program, and other local characteristics also affect Chapter 1 student achievement.

The 1988-1989 ITBS gains of Chapter 1 students were compared to Illinois State Board of Education standards for improvement. School-level results were compared to the following criteria:

1. The mean NCE gain for all Chapter 1 students in reading and/or mathematics programs should be positive.

2. Seventy-five percent or more of the Chapter 1 students will make positive NCE gains in reading and/or mathematics.

3. Two thirds or more of the grade level means of Chapter 1 students in reading and/or mathematics, as applicable, are positive.

Failure to meet any of the above criteria required the school to submit a Chapter 1 Program Improvement Plan.

CLASSROOM OBSERVATIONS IN ELEMENTARY SCHOOLS

Prepared by Nancy I. Hiestand and Marion Rice

Classroom observations provided detailed information about delivery of services in Chapter 1 classrooms. In the 1988-89 school year, observers from the Bureau of Program Evaluation, Department of Research, Evaluation and Planning, visited 459 classrooms in designated elementary schools where students, grades one through eight, were receiving remedial instruction in either self-contained or pullout settings. The purpose of the observations was to gather information about the instructional program in various subject areas and students' response to the program that could account for differences in overall student achievement. The observations were recorded on either the *1988-89 ECIA Chapter 1 Laboratory Pullout Programs Form* or the *1988-89 ECIA Chapter 1/RIP Self-Contained and Teacher-Devised Pullout Programs Form.*

The self-contained classroom approach was adopted in 127 public schools and included an estimated 9,327 students in grades one through eight. (See *ECIA Chapter 1 Application: Fiscal 1989*, Chicago Public Schools.) Staff included 347 Chapter 1-funded teachers (with an equal number of Board-funded teachers) and 136 teacher aides. The pullout model of supplementary remedial instruction was followed in 223 schools. The estimated number of students in pullout programs was 34,706 in grades one through eight; staff included 488 teachers and 196 aides. Reading pullout programs were offered in 159 schools, mathematics pullout programs in 60 schools, and pullout programs in which both reading and mathematics were taught, in 95 schools. Schools could offer one or more of these types of programs. One-third of the Chapter 1 schools were in the observation sample, and individual classrooms were usually visited once or twice during the school year.

Observers visited 232 classrooms that used the augmented staffing, self-contained approach to instruction. In this approach, an elementary school teacher spent the entire day with about 16 students (half the usual number in a regular classroom), covered all subjects, and shared an aide with another augmented staffing teacher. Observations were also conducted in 227 pullout classrooms: in laboratory settings where computer-assisted instruction predominated (N=113) and in other settings where the teacher was the planner and instructor of the program (N=114).

Classes were observed for approximately 30 minutes each, and information about each class was recorded on the standardized form. Data were collected on subjects being taught, grade, instructional level of students, attendance, lesson presentation, learning environment, materials, and student response. This report describes teacher activity in reading and mathematics classes, in both direct and indirect instructional settings. Teachers' relationships with students, overall use of time during the observation period, student reaction to the program, materials used, and teacher aide activities are also covered.

Characteristics of Instruction

Laboratory Pullout Classrooms (Tables 1.1, 1.2, 1.3)

Computer-assisted instruction predominated in laboratory pullout classrooms. Median enrollment in a laboratory was 12 students and median attendance was 11 students. The median number of computer stations observed in a classroom was 10; in use, 7. The median number of students having an opportunity, during the observation period, of working on a computer was 8. Reading was the subject of instruction in most computer laboratories (70 percent overall); in 14-16 percent of the laboratories, mathematics was the subject alone or in combination with reading. The average time spent by a student at the computer during the observation period was 30 minutes. Classes were also observed for 30 minutes on average. Across all laboratories, the average time needed for most of the incoming students to get started on their computer lessons was three minutes. When observed, Bhards/New Century classes were underway in about a minute, while Prescription Learning classes averaged four minutes.

Most of the laboratory classrooms also included noncomputer stations which afforded students an opportunity to work at various other learning machines or at tables or desks. Noncomputer work stations were found most often in Bhards/New Century (averaging 14) and Eclectic classes (averaging 10). No noncomputer stations were noted in the observed National School Services laboratories.

Instructional methods employed in computer programs were characterized mainly as drill and practice or tutorial activities. In nearly all cases, the computer lessons provided immediate feedback to students, gave the correct answer, and allowed enough time for a student to answer the question. Variety in lesson presentation and response patterns was noted in about 77-78 percent of the observations.

When teacher-directed instruction was observed in these laboratories, the program, in nearly all cases, was appropriate for students, interesting, and correlated to learning station or regular classroom instruction. Reading was also the most frequently observed subject of teacher-directed instruction.

TABLE 1.1
Computer and Noncomputer Installations in Laboratory Pullout Classes

(In medians)	Small Group Eclectic N	Prescription Learning N	Bhards/ New Century N	National School Services N	Other N	All N
Computer stations present	10	10	8	12	10	10
Computer stations in use	7	3	5	9	12	7
Number of students using computers	8	7	7	10	12	8
Subject of computer instruction:	% N	% N	% N	% N	% N	% N
Reading	73 (30)	63 (41)	90 (10)	67 (9)	67 (9)	70 (100)
Mathematics	17	20	10	11	11	16
Reading, Mathematics	10	17		22	22	14
Average number of minutes spent by student at computer	30	30	33	30	30	30
Noncomputer stations present	10	8	14	--	4	10
Noncomputer stations in use	1	3	5	--	--	3
Subject of noncomputer instruction:	% N	% N	% N	% N	% N	% N
Reading	79 (24)	69 (32)	83 (6)	100 (2)	67 (9)	77 (68)
Mathematics	3	9	17	--	17	10
Reading, Mathematics	4	22	--	--	22	12
Other	4	--	--	--	--	1
	N	N	N	N	N	N
Average minutes at noncomputer station	30	30	30	30	30	30
Average minutes for lab to get started	2.7	4	1	2	2	3

Average enrollment = 12

Average attendance = 11

TABLE 1.2
Characteristics of Instruction by Computer in Laboratory Pullout Classes

	Eclectic	Prescription Learning	Bhards/ New Century	National School Services	Other	All
	(N=35) %	(N=48) %	(N=10) %	(N=9) %	(N=10) %	(N=113) %
Instructional methods employed by computers:						
Tutorial	54	60	50	89	60	60
Drill and practice	71	77	70	100	80	76
Simulation	3	4	--	22	10	5
Games	11	4	20	--	10	8
Problem solving	6	17	30	33	10	15
Testing	3	10	10	--	--	6
"Yes" responses						
Computer provides immediate feedback	96	98	78	100	78	94
Computer provides correct answer	86	98	67	100	78	90
Lesson presentation varied	61	86	67	100	78	78
Response patterns varied	61	84	67	100	78	77
Sufficient time for response	100	100	100	100	100	100

TABLE 1.3
Characteristics of Teacher-Directed Instruction in Laboratory Pullout Classes

"Yes" responses

	Eclectic (N=24) %	Prescription Learning (N=25) %	Bhards/ New Century (N=1) %	National School Services (N=1) %	Other (N=7) %	All (N=59) %
Lesson clear	92	96	100	100	100	95
Appropriate for students	100	100	100	100	100	100
Held student interest	96	96	100	100	100	97
Correlated to station or classroom instruction	92	96	100	100	86	93
Subject of teacher-directed instruction:						
Reading	58	72	100	100	86	68
Mathematics	29	12			14	17
Reading and Mathematics	8	12				10
Other	4	4				5

Teacher-Devised Pullout Classrooms (Nonlaboratory) (Table 1.4)

The median enrollment in the observed pullout classes was 10 students, and the median attendance was 9 students. In most of the observed nonlaboratory pullout classrooms, the direct instruction was clear, well organized, appropriate for students' abilities, and interesting (positive responses on these questionnaire items ranged from 87-99 percent). In almost all subjects, slightly more than half (53 percent) of the observed teachers spent most of the class period with individuals or small groups of students. Teachers differentiated instruction during a teacher-directed lesson in about two-thirds of the classes observed. (Paraphrasing information and/or using varied presentation methods are examples of differentiated instruction.) It was noted that the teacher stated the objective of the direct instruction in three-quarters of the observations. Summaries or reviews occurred in 65 percent of the observations in reading classes, in 77 percent of the mathematics lessons, and in 71 percent of the observations across all subjects.

In nearly all observations of independent student work, the activities were related to current instruction and provided application experiences, with teachers providing pacing cues. The teacher indicated the objective of the seatwork in about 63 percent of the observations. (This is probably an underestimate because observers may have entered the classrooms after a lesson had begun.)

TABLE 1.4
Characteristics of Instruction in Teacher-Devised Pullout Classes (Nonlaboratory)

"Yes" responses	Reading (direct instruction)		Math (direct instruction)		All	
Lesson:	%	N	%	N	%	N
Clear	93	(41)	92	(12)	93	(67)
Well-organized	83	(41)	83	(12)	87	(67)
Appropriate to student ability	98	(41)	100	(12)	99	(67)
Held students' interest	90	(41)	92	(12)	93	(67)
Teacher:						
Stated what would be learned in lesson	67	(43)	75	(12)	74	(66)
Explained lesson in his/her words	81	(43)	85	(13)	86	(69)
Differentiated instruction	52	(42)	75	(12)	63	(68)
Summarized and/or reviewed lesson	65	(43)	77	(13)	71	(68)
Spent most of time in small group	42	(72)	35	(23)	53	(92)
	Reading (independent work)		Math (independent work)			
Indicated objective	56	(45)	57	(14)	63	(64)
Provided pacing cues	93	(41)	72	(18)	89	(75)
Work provided application experiences	98	(45)	100	(14)	98	(65)
Work related to current instruction	93	(45)	100	(14)	95	(65)
Average enrollment = 10						
Average attendance = 9						

Self-Contained Classrooms (Table 1.5)

The median enrollment in the observed self-contained classes was 15 and average attendance was 14 students. In nearly all the observed reading and mathematics classes during direct instruction, the lesson was clear, well-organized, appropriate for students, and held students' interest (all ratings were above 90 percent). While nearly all reading class teachers explained the lesson in their own words, these teachers were less likely to articulate what was to be learned or to summarize or review than the mathematics teachers. It was noted that teachers differentiated instruction by varying the instructional approach in about two-thirds of the observed reading and mathematics classes. Overall, in somewhat less than half the rooms (46 percent) the teachers spent most of the time in small-group or individualized instruction.

Independent reading and mathematics work in self-contained classes provided application experiences that were related to current instruction in nearly all cases. However, in only about two-thirds of the classes did the teachers articulate the purpose of the seatwork to the students. Pacing cues to keep children on their independent tasks were given by the teacher in most of the observed reading and mathematics classes.

TABLE 1.5
Characteristics of Instruction in Augmented Staffing (Self-Contained) Classes by Subject

"Yes" responses	Reading (direct instruction)		Math (direct instruction)		All	
Lesson:	%	N	%	N	%	N
Clear	96	(91)	93	(43)	95	(160)
Well-organized	92	(92)	93	(43)	91	(154)
Appropriate for students	99	(91)	95	(43)	98	(165)
Held students' interest	96	(91)	95	(43)	92	(154)
Teacher:						
Stated what would be learned	75	(91)	91	(43)	79	(132)
Explained lesson in own words	92	(92)	95	(44)	93	(170)
Differentiated instruction	63	(90)	68	(44)	64	(167)
Summarized/reviewed	81	(88)	88	(43)	81	(160)
Spent most of time in individualized or small-group instruction	57	(117)	46	(61)	46	(230)
	Reading (independent work)		Math (independent work)			
Teacher:						
Indicated objective of lesson	64	(88)	64	(39)	65	(158)
Provided pacing cues	90	(83)	95	(43)	91	(162)
Work provided application experiences	99	(88)	100	(40)	99	(159)
Work related to current instruction	99	(86)	100	(40)	99	(157)
Average enrollment = 15						
Average attendance = 14						

Summary of Characteristics of Instruction

The predominant approach to instruction in laboratory pullout classrooms was computer-assisted; in the pullout classrooms with a teacher-devised program, the emphasis was on individual or small-group instruction; and in the self-contained classrooms, on direct teacher instruction. In nearly all classrooms the work appeared to be appropriate and well managed, and the students responded in a manner consistent with program guidelines.

Teacher Questioning

Laboratory Pullout Classrooms (Table 2.1)

The observations reported here pertain to teacher questioning behavior throughout the class period. In 95 percent or more of the computer-dominant classrooms, teachers interacted with students, encouraged the students to ask questions, and responded to the students' questions. In 78 percent of the observations, the teachers were observed encouraging the students to answer questions, and in 81 percent of the classes, the response opportunities were spread equitably among the students.

Teacher questioning behavior in the various computer laboratory approaches seemed to follow the overall trend, although there appeared to be less opportunity for teachers to encourage students to ask or answer questions in the Bhards/New Century program.

TABLE 2.1
Teacher Questioning in Laboratory Pullout Classes

"Yes" responses

	Eclectic	Prescription Learning	Bhards/ New Century	National School Services	Other	All
Teacher:	% N	% N	% N	% N	% N	% N
Requested student response	77 (35)	85 (48)	40 (10)	50 (8)	100 (10)	78 (112)
Responded to requests for help	96 (29)	100 (44)	100 (10)	89 (9)	100 (8)	98 (101)
Interacted with students	91 (35)	96 (48)	100 (10)	100 (9)	90 (10)	95 (113)
Encouraged students to answer questions	80 (35)	77 (48)	44 (9)	78 (9)	100 (10)	78 (112)
Encouraged students to ask questions	60 (35)	63 (48)	30 (10)	88 (8)	90 (10)	97 (59)
Provided equitable response opportunities	83 (35)	83 (48)	30 (10)	100 (9)	100 (10)	81 (113)

Teacher-Devised Pullout Classrooms (Nonlaboratory) (Table 2.2)

During direct teacher instruction, nearly all teachers (97 percent) in these programs gave all their students an opportunity to respond to questions. About 83-84 percent of the teachers probed the students' answers and raised questions in their own words. Teachers' encouragement of students' questions was noted in about 61 percent of the observations. Questions requiring higher-order thinking on the part of the students were reported in 52 percent of the observations.

During student independent work periods, while the students seemed to be encouraged to ask questions during only about half of the observations, the teacher was seen moving around the class or interacting with students and responding to questions in about 85-91 percent of the observations.

When comparing direct teacher instruction in reading and mathematics pullout classes, the data indicate that teachers of the mathematics pullout classes were more likely than reading teachers to encourage questions and to ask questions rated as requiring higher thinking skills. During independent work periods, too, the teachers of mathematics seemed more likely than reading class teachers to encourage students to ask questions.

TABLE 2.2
Teacher Questioning in Teacher-Devised Pullout (Nonlaboratory) Classes by Subject

"Yes responses

Teacher:	Reading (direct instruction) %	N	Math (direct instruction) %	N	All %	N
Encouraged questions	47	(43)	62	(13)	61	(69)
Responded to students' questions	96	(26)	82	(11)	96	(51)
Probed students' responses	83	(40)	77	(13)	83	(66)
Raised questions in own words	81	(43)	85	(13)	84	(69)
Questions required higher-order thinking skills	35	(43)	54	(13)	52	(69)
Provided equitable response opportunities	95	(43)	92	(13)	97	(69)
	Reading (independent work)		Math (independent work)			
Requested student response	71	(45)	71	(14)	74	(65)
Responded to requests for help	76	(45)	86	(14)	91	(58)
Moved among/interacted with students	80	(45)	79	(14)	85	(65)
Encouraged students to answer questions	64	(45)	57	(14)	71	(65)
Encouraged students to ask questions	38	(45)	57	(14)	52	(65)

Self-Contained Classrooms (Table 2.3)

Teacher questioning patterns were similar during direct instruction in both reading and mathematics classes. Teachers in about 80 percent of the rooms rephrased questions from the text, raised additional questions, probed students' answers, and responded to students' questions. Questions from students were encouraged by the teachers in 71-75 percent of the observed classes. Questions requiring higher-order thinking (e.g. "Why?" and requests for predictions or estimates) were noted during direct instruction in 61 percent of the reading classes and 73 percent of the mathematics classes.

Teacher questioning was less frequent during independent reading-related work periods than during direct reading instruction, although questioning and offers of help seemed to continue during mathematics seatwork as they had during direct mathematics instruction.

TABLE 2.3
Teacher Questioning in Augmented Staffing (Self-Contained) Classes by Subject

"Yes" responses	Reading (direct instruction)		Math (direct instruction)		All	
Teacher:	%	N	%	N	%	N
Encouraged questions	71	(92)	75	(44)	70	(170)
Responded to students' questions	77	(91)	80	(44)	77	(135)
Probed students' responses	79	(91)	80	(44)	79	(169)
Raised questions in own words	80	(92)	82	(44)	81	(170)
Questions required higher-order thinking skills	61	(92)	73	(44)	64	(108)
Provided equitable response opportunities	89	(92)	84	(44)	89	(170)
Teacher:	Reading (independent work)		Math (independent work)			
Requested student response	52	(88)	70	(40)	57	(159)
Responded to requests for help	72	(87)	85	(39)	80	(157)
Moved among/interacted with students	55	(87)	78	(40)	65	(158)
Encouraged students to answer questions	61	(88)	73	(40)	65	(159)
Encouraged students to ask questions	44	(88)	53	(40)	47	(159)

Summary of Teacher Questioning

In all classroom approaches, students were encouraged to answer questions. Observers most often recorded that the opportunities for students to respond orally were distributed equitably during direct instruction in teacher-devised pullout classes. In both the teacher-devised pullout classrooms (nonlaboratory) and the self-contained classrooms, opportunities for equitable response and probing were more frequent, as expected, during direct instruction than during seatwork, which was usually an independent, silent activity. Questions requiring higher-order thinking were noted in only about half the observations of teacher-led instruction.

Learning Environment

Laboratory Pullout Classrooms (Table 3.1)

In almost all of the laboratory pullout classrooms and the separate pullout programs identified in the table, the teacher maintained discipline, the laboratory routines were well organized, and full use was made of the time available. In 93 percent of the observed classrooms, the teacher monitored or guided the students' instruction at both the computer and noncomputer stations.

TABLE 3.1
The Learning Environment in Laboratory Pullout Classes Using Computers

"Yes" responses	Eclectic		Prescription Learning		Bhards/ New Century		National School Services		Other		All	
	%	N	%	N	%	N	%	N	%	N	%	N
Lab routines well organized	97	(35)	100	(48)	80	(10)	100	(9)	100	(10)	97	(113)
Full use made of time	97	(35)	94	(48)	80	(10)	100	(9)	100	(10)	95	(113)
Teacher monitored instruction at computer/noncomputer stations	94	(35)	94	(47)	90	(10)	89	(9)	90	(10)	93	(112)
Teacher maintained discipline	100	(35)	98	(48)	90	(10)	100	(9)	100	(10)	98	(113)
Discipline constructive	100	(19)	89	(28)	75	(4)	--		--		93	(54)

Teacher-Devised Pullout Classrooms (Nonlaboratory) (Table 3.2)

During the 30-minute observation period, the teacher was almost always recorded as maintaining discipline and using disciplinary measures constructively, communicating and relating well with students, and keeping transition time to a minimum. In most cases, the teacher began the activity promptly and encouraged students. In 89 percent of the observations, the teacher spent less than five minutes on clerical, housekeeping, or noninstructional tasks. For three-fourths of the observations over all subjects, it was reported that the teacher spent most of the time, (at least 20 minutes) of the period in direct instruction. In approximately 81 percent of the observations in reading classes, teachers spent most of the time in direct instruction. Direct instruction was reported less often in mathematics classes. Differences between reading and mathematics classes on other items in Table 3.2 relating to the learning environment were negligible.

TABLE 3.2
The Learning Environment in Teacher-Devised Pullout Classes (Nonlaboratory)

"Yes" responses

Teacher:	Reading		Math		All	
	%	N	%	N	%	N
Spent at least 20 minutes on direct instruction	81	(72)	61	(23)	76	(114)
Spent less than 5 minutes on non-instructional tasks	88	(72)	83	(23)	89	(114)
Began activity promptly	90	(59)	90	(20)	94	(93)
Kept transitional time to minimum	96	(51)	100	(19)	96	(83)
Had good working relationship with students	97	(72)	96	(23)	97	(114)
Encouraged students	92	(71)	91	(23)	92	(113)
Communicated well with students	97	(72)	100	(23)	98	(114)
Maintained discipline	99	(72)	100	(23)	99	(114)
Used disciplinary measures constructively	90	(21)	100	(6)	95	(37)

Self-Contained Classrooms (Table 3.3)

In the augmented staffing classrooms, transitional time was kept to a minimum, and in 90 percent of the observations, teachers spent less than five minutes of the time on clerical, housekeeping, and noninstructional tasks. In more than three-fourths of the observations, teachers spent most of the time providing direct instruction. Differences between reading and mathematics classes on these items were minimal.

Observers found that in almost all augmented staffing classes, the teacher had a good working relationship with students and maintained discipline in the room. In 94 percent or more of the rooms, the teacher encouraged the students, communicated well with them, and used constructive disciplinary measures. Teacher/student relationships were similar and positive in both reading and mathematics classes.

TABLE 3.3
The Learning Environment in Augmented Staffing (Self-Contained) Classes

"Yes" responses	Reading		Math		All	
Teacher:	%	N	%	N	%	N
Spent at least 20 minutes of the time in direct instruction	85	(118)	79	(61)	81	(232)
Spent less than 5 minutes in non-instructional tasks	91	(117)	95	(61)	90	(230)
Began activity promptly	97	(92)	93	(43)	94	(170)
Kept transitional time to minimum	99	(97)	96	(50)	96	(186)
Had good working relationship with students	97	(118)	98	(60)	97	(231)
Encouraged students	95	(118)	95	(60)	94	(230)
Communicated well with students	96	(118)	97	(60)	95	(231)
Maintained discipline	97	(118)	97	(60)	97	(231)
Used disciplinary measures constructively	96	(68)	87	(30)	94	(125)

Summary of the Learning Environment

A positive learning environment was observed in nearly all Chapter 1 classrooms, whether they were computer, noncomputer, or self-contained classrooms. Orderly, disciplined programs were the norm when observations took place. In the teacher-directed noncomputer programs and in the self-contained classrooms, teachers were engaged in direct instruction most of the time, and little time was spent in noninstructional tasks.

Student Response

Laboratory Pullout Classrooms (Table 4.1)

In the laboratory pullout classrooms, all students appeared to understand laboratory routines and what was expected of them. When the observations took place, almost all students were on task. In over 90 percent of the observations, the students appeared cooperative, displayed initiative and independence, and were eager to participate.

TABLE 4.1
Student Response in Laboratory Pullout Classes

"Yes" responses	Eclectic	Prescription Learning	Bhards/ New Century	National School Services	Other	All
	(N=35) %	(N=48) %	(N=10) %	(N=9) %	(N=10) %	(N=113) %
Students:						
Understood lab routines	100	100	100	100	100	100
Cooperative	97	90	100	89	90	93
Understood what was expected	100	100	100	100	100	100
Displayed initiative, independence	91	94	90	100	100	94
Eager to participate	94	88	80	100	100	91
All (nearly all) on task	100	96	90	100	100	97

Teacher-Devised Pullout Classrooms (Nonlaboratory) (Table 4.2)

Here, too, almost all students seemed to understand what they were to do in the class, and nearly all stayed on task. In 91 percent of the observations, the students were eager to take part in the activities, and 88 percent showed initiative and independence.

TABLE 4.2
Student Response in Teacher-Devised Pullout Classes (Nonlaboratory)

"Yes" responses	Reading (N=72) %	Math (N=23) %	All (N=114) %
Students:			
Cooperative	93	96	94
Understood what was expected	97	100	98
Displayed initiative, independence	85	91	88
Eager to participate	90	91	91
All (nearly all) on task	96	91	95

Self-Contained Classrooms (Table 4.3)

During the 30-minute observation period, almost all students appeared to understand what was expected of them. In more than 90 percent of the observations, the students seemed cooperative, eager to participate, and nearly all stayed on task. In 87 percent of the observations overall, the students demonstrated initiative and independence.

TABLE 4.3
Student Response in Augmented Staffing (Self-Contained) Classes by Subject

"Yes" responses	Reading (N=118) %	Math (N=61) %	All (N=232) %
Students:			
Cooperative	96	97	94
Understood what was expected	98	95	97
Displayed initiative, independence	86	95	87
Eager to participate	95	93	92
All (nearly all) on task	95	93	92

Summary of Student Response

In almost all of the observed classrooms, students were attentive and interested in the program, following directions, and displaying a certain amount of initiative and independence.

Teacher Aide Activities

Laboratory Pullout Classrooms (Table 5.1)

Aides were assigned to a few less than half of the 113 classrooms observed. The assigned aide was not present in 15 percent of the laboratories. The data in Table 5.1 refer to the activities of the aides who were seen. Most often, aides worked with individual students or with small groups, monitored the instructional activities, or helped with record-keeping. Data on separate programs (based on small numbers of observations) follow the same trend.

TABLE 5.1
Teacher Aide Activities in Laboratory Pullout Classes

(Observed aide)	Eclectic (N=13) %	Prescription Learning (N=22) %	Bhards/ New Century (N=4) %	National School Services -- %	Other (N=5) %	All (N=44) %
Worked with individuals or groups to reinforce skills	54	59	50	--	80	59
Monitored instructional activities	69	14	50	--	80	66
Operated audiovisual, instructional equipment	31	5	--	--	20	14
Maintained student records/ other clerical tasks	15	41	75	--	20	34
Other	8	14	--	--	20	11
	% N	% N	% N	% N	% N	% N
No aide assigned	54 (35)	44 (48)	60 (10)	100 (9)	50 (10)	54 (113)
Aide not present	19 (16)	19 (27)	--	--	__	15 (52)

Source: 1988-89 ECIA Chapter 1 Laboratory Pullout Programs Classroom Observation Form, Department of Research and Evaluation, Bureau of Program Evaluation, Chicago Public Schools.

Teacher-Devised Pullout Classrooms (Nonlaboratory) (Table 5.2)

Aides were assigned in about 20 percent of the nonlaboratory pullout classes. In approximately 25 percent of the observations, the assigned aide was not present. Aides in mathematics classes were more often occupied with small groups or individual students than were aides in reading classes (though this trend was based on a small number of responses).

TABLE 5.2
Teacher Aide Activities in Teacher-Devised Pullout Classes (Nonlaboratory)

(Observed aide)	Reading (N=10) %	Math (N=5) %	All (N=17) %
Worked with individuals or groups to reinforce skills	40	80	47
Monitored instructional activities	30	60	29
Operated audiovisual, instructional equipment	10	—	6
Maintained student records/ other clerical tasks	10	—	29
Other	10	20	12
	% N	% N	% N
No aide assigned	82 (72)	70 (23)	80 (114)
Aide not present	23 (13)	29 (7)	26 (23)

Source: 1988-89 Chapter 1/RIP Self-Contained and Teacher-Devised Pullout Programs Classroom Observation Form, Department of Research and Evaluation, Bureau of Program Evaluation, Chicago Public Schools.

Self-Contained Classrooms (Table 5.3)

Most (70 percent) of the observed classes had no aide during the period of observation. When aides were assigned, they were seen a little less than half the time, and less often in the room during reading than during mathematics instruction.

TABLE 5.3
Teacher Aide Activities in Augmented Staffing (Self-Contained) Classes

(Observed aide)	Reading (N=18) %	Math (N=12) %	All (N=33) %
Worked with individuals or groups to reinforce skills	56	33	48
Monitored instructional activities	22	--	18
Operated audiovisual, instructional equipment	--	--	--
Maintained student records/ other clerical tasks	33	25	30
Other	6	--	6
	% N	% N	% N
No aide assigned	70 (118)	72 (61)	70 (232)
Aide not present	49 (35)	29 (17)	53 (70)

Source: 1988-89 ECIA Chapter 1/RIP Self-Contained and Teacher-Devised Pullout Programs Classroom Observation Form, Department of Research and Evaluation, Bureau of Program Evaluation, Chicago Public Schools.

Summary of Teacher Aide Activities

Teacher aides were observed most often in computer laboratories. In all programs, they were most frequently working with individual students, monitoring classroom activities, or performing clerical tasks.

Summary

Classroom observations provided detailed information about the delivery of services in Chapter 1 classrooms. In the 1988-89 school year, observers from the Bureau of Program Evaluation, Department of Research and Evaluation (now called the Department of Research, Evaluation and Planning), visited 459 classrooms in designated schools where students, grades one through eight, who were most in need of supplemental instruction, were being taught either in self-contained or pullout classroom settings. In the self-contained approach, an elementary school teacher spent the entire day with approximately 16 students (half the usual number found in a regular classroom), covered all subjects, and shared an aide with another teacher in the same type of self-contained program. In the pullout classrooms, students usually spent one period per day in laboratory settings where computer-assisted instruction predominated or in other settings where the teacher was the planner and instructor of the program.

Field observers collected data on subject areas being taught, grade and instructional level of students, attendance, lesson presentation, learning environment, and student response. The purpose of the observations was to gather information about instruction that would account for differences in overall student achievement. The results of the observations may be summarized as follows:

Instruction: In all types of observed programs, the instruction was found to be appropriate, interesting to the students, clear, and well organized. In the case of pullouts, instruction was well correlated with the regular program. Direct, teacher-led, instruction in the pullout classes seemed to offer students the most equitably distributed opportunities to respond orally. In the teacher-directed noncomputer programs and in the self-contained classrooms, teacher engaged in direct instruction most of the time. Student interaction with a teacher aide, in addition to the teacher, occurred most frequently in the laboratories that used computer-assisted instruction.

Small-group or individualized activities took place most of the time in only about half the observed self-contained and teacher-devised classes. In self-contained classes, the purpose of written seatwork was articulated to students about two-thirds of the time. The objectives were less likely to be stated in reading classes than in mathematics classes.

Questioning: In all classroom instructional approaches, the opportunities for students to respond to questions were equitably distributed. During independent work, teachers usually moved around the classrooms, interacting with their students. Questions were more prevalent in mathematics than in reading classes. Questions requiring students to engage in higher-order thinking were noted in about half the observed teacher-led classrooms.

Learning Environment: Disciplined and orderly environments characterized nearly all the observed classes, and time was used efficiently. Direct teacher-led instruction was observed less often in mathematics classes than in reading classes.

Student Response: In all programs, the students gave evidence of understanding the work. They were cooperative and eager to participate in the classroom activities.

Teacher Aides: Teacher aides were assigned to about half the observed computer-assisted programs and in about a quarter of the other programs. They were most often observed working with individual students or monitoring instructional activities.

Conclusions

The quantity of direct teacher instruction, small-group instruction and computer-assisted instruction varied according to instructional approach. Accordingly, there were differences in the managerial styles within the classrooms. The following specific conclusions are suggested by the data:

- Small-group and individualized activities were not in as much evidence as expected, given the Chapter 1 emphasis.
- While teacher questioning was noted in mathematics classes more often than in reading classes, the time devoted to direct teacher-led mathematics instruction was less, on average, than in reading classes. Questions requiring higher-level thinking on the part of students were noted in only about half the observations in pullout classes and two-thirds of the observed self-contained classes.
- Objectives of the lessons were not often stated to students directly.
- Teacher aides were not as active as they might have been as instructional assistants, since they were often observed performing clerical and other duties.

Recommendations

The various instructional approaches afforded pupils an opportunity to interact in a variety of ways: with the teacher directly, with computer programs, and frequently with aides and other students. The individual needs of the pupils should determine the best instructional approach. The following recommendations for changes in lesson presentation are related to the specific conclusions above:

- Increase the amount of classroom time devoted to small-group and individualized activities, particularly during teacher-led mathematics instruction. Increase the time for independent reading. Decrease solitary seatwork and rote practice.
- Ask more questions of students that require a higher level of thought and inference. Help students make and test predictions.
- Redistribute the time scheduled for mathematics to allow for more direct instruction and discussion.
- State the objective of the lesson, project, seatwork, or activity more often to students. Avoid developing skills out of context.
- Give teacher aides increased opportunities to participate more directly and frequently in the instructional program.

CLASSROOM OBSERVATIONS OF PRESCHOOL PROGRAMS

Prepared by Muriel J. Clarkston

Three ECIA Chapter 1 schools implemented a preschool program during the 1988-89 school year. The enrollment ranged from 15 to 20 students per class. In two of the schools, the students attended half-day sessions. Each teacher taught two classes, one in the morning and one in the afternoon. In one school, a full-day program was implemented enrolling 15 students.

Eight observations were conducted. The attendance during observations ranged from 14 to 19 students. Each program was observed two or three times. Observations were conducted from February through May, usually on Mondays or Tuesdays. Though most (six) of the observations were conducted in the morning, two were conducted in the afternoon. The full-day program and one of the half-day programs were observed during both morning and afternoon sessions. Each observation period lasted approximately 30 minutes.

There were a variety of activities noted during the observations. Some were readily identifiable as related to specific subject areas, while the relationship of others to academic work was less direct and could be characterized as readiness and/or socialization-related as shown in Table 1.

TABLE 1
Activities Noted During Observations of the ECIA Chapter 1 Preschool Classes

(N=8) Subject-Related	f	Readiness or Socialization-Related	f
Reading	2	Free Play	2
Mathematics	3	Teacher Organized Play	1
Science	1	Socialization	1
Language Arts	3		
Health/Safety	1		

Characteristics of Instruction

During each observation, the classes were conducted by teachers assisted by teacher aides. In five of the observations, parents also assisted with the class activities. The number of parents present ranged from two to eight. In one program, six, seven, or eight parents were present during each of the three observations of that class, while in another preschool program, two or four parents were present during two of the three observations.

Lessons directed by the teachers were presented during seven of the eight observations. In all cases it was noted that the lessons were presented clearly, were well organized, appropriate to the students' ability, and held their interest. The teachers stated what was to be learned and responded to the students' questions. However, in one of the observations, the observer noted that students were not encouraged to ask questions of the teacher.

Questions asked by teachers included those requiring higher order thinking on the part of the students. The teachers also investigated and probed student responses. It was noted that the teachers explained the lessons and raised questions in their own words rather than reading directly from the textual materials. It was also observed that teachers provided equitable opportunities for the students to respond to questions or to recite. The teachers varied instruction, summarized (in six of the seven lessons), and/or reviewed the lessons for the students.

During five of the eight observations, students worked independently as well as received direct instruction from the teacher. The teachers (four) usually requested students' responses, moved among the students asking questions and obtaining responses, and, in most cases, (three) encouraged students to answer questions. The teachers encouraged students to ask questions as well. In almost all of the five cases observed, the teachers indicated the objectives of the lesson. The seatwork provided application experiences that seemed related to the current lesson.

All of the teachers were observed to have good working relationships with their students. They encouraged them and communicated well while at the same time maintained discipline in the classroom. The disciplinary measures observed were constructive in nature. It was further noted that the teachers spent at least 20 of the 30-minute observation period in instruction and less than five minutes in performing clerical duties. The lessons were begun promptly and transitional time (changing from one activity to another) was kept to a minimum. In all but one observation, the teachers kept the students on task by providing pacing cues. In six of the eight observations, instruction was provided to small groups of students during most of the observation.

The students were observed to be responsive to the instructional program. They were cooperative, appeared to understand what was expected of them, displayed initiative and independence, were eager to participate in the class activities, and stayed on task throughout the period.

Conventional classroom materials such as worksheets and the blackboard were used in only two of the eight observations. Learning kits and manipulatives were evident in six observations. Toys were major materials during four observations, while an incubator in which baby chicks were hatching was the central material in one observation. Breakfast and/or illustrative pictures for other learning activities were noted in two observations.

The teacher aides worked with small groups to reinforce skills during four of the observations and monitored student instructional activities in five observations. In only one observation, an aide performed clerical tasks such as maintaining student record folders, etc.

Program Profiles

Although the three preschool programs shared a number of similarities, there were also distinct differences in their general management strategies. A discussion of these differences can increase understanding of the total project. For identification purposes, the three programs will be labeled A, B, and C.

The major difference noted in the three preschool programs was the way in which play activities were managed. Play is considered the major activity of childhood. A position statement of the National Association for the Education of Young Children (NAEYC) asserts that "Children acquire knowledge about the physical and social worlds in which they live through playful interaction with objects and people."[1] Also, "Teachers of young children are more like guides or facilitators. . .They prepare the environment so that it provides stimulating, challenging materials and activities for children. Then, teachers closely observe to see what children understand and pose additional challenges to push their thinking further."[2]

These two statements from NAEYC form a "yardstick" by which the three ECIA Chapter 1 preschool programs can be discussed. The topics to be considered are "Classroom Activities Observed" and "Classroom Environment and Teacher/Student Interaction."

Classroom Activities Observed

Program A

The large room was clearly divided into play and skill areas. Half of the students worked in the skill areas, while the others selected activities in the play area. Skill activities included counting, puzzle construction, alphabet, color and number identification, and recognition of beginning letter sounds in words as well as recognition of words in print. In the play area, children played in the housekeeping center in a playhouse, on play equipment (slide), and with games and toys (trains, hula hoops, balls, etc.). There were rugs on the floor in at least two areas.

Parents supervised the play activities while the teacher, aide, and other parents worked with the students in small groups in the skills area. At the beginning of the day, there was a total group activity during which previously taught skills were reviewed, i.e., beginning sounds, letter recognition, name recognition in print, etc.

Program B

The class was held in a large, attractively decorated room that contained several centers: kitchen, playhouse, easel. There was a rug on the floor. This was a full-day preschool program for 15 students. The program was conducted by a teacher assisted by an aide. No parents were observed during either of two observation visits. Most of the activities, whether skills or play-oriented, were usually whole class and teacher-directed. Some free play time was provided, however. Pictures were used extensively as teaching aids. In most cases, student movement was controlled by the teacher. A nap period was provided. The children slept on cots.

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[1]National Association for the Education of Young Children. *Good Teaching Practices for 4- and 5-Year-Olds*. Brochure No. 52. (Washington, DC: the Association, 1986), p. 3.

[2]Ibid., p. 4.

Program C

The program was conducted in two rooms. One room was used for the large motor skills and play activities, while the second room was designed for teaching skills. The class was conducted by the teacher assisted by an aide. Parents were present during two of the three observations: four on one occasion and two during a second observation.

Play and skill learning were facilitated by a variety of materials and equipment. These included play dough, flexi-blocks, unit blocks, a red rocker, a kitchen area, art materials, a live rabbit, mobiles, and an incubator in which chicks were hatching. Games were played and songs were sung.

Classroom Environment and Teacher/Student Interaction

Program A

The teacher selected the general areas of activity that were expected to facilitate learning. Materials for play and learning were provided. Exploration by the child was facilitated. The environment, especially the play area, was conducive to exploration and interaction with adults, other children, and materials. Concrete learning activities with materials and people relevant to the students' own life experiences were in evidence.

The teacher provided the learning environment and served as a catalyst for learning activities by moving among the students, usually in the skill area, asking questions and making suggestions. Further, the teacher modeled and encouraged expected behavior, redirecting the students, when necessary, to more acceptable behavior. This was sometimes necessary in relation to the parent helpers also. In one case, a parent was so concerned about the performance of her child that she became very persistent. The teacher, who generally presented a quiet, accepting manner, gently transferred the supervision of the student to herself and encouraged the parent to work with other students, thus preventing what was developing into a serious disturbance. The student responded very positively to the teacher and exhibited a more adequate performance of the assigned task.

The children were provided with many opportunities to develop social skills, especially while in the play area, and, in a more limited manner, while working in the skill area. The children were expected to be both physically and mentally active when in the play area. While in the skill area, the groups were more formal.

Program B

The adult role was dominant in this classroom. Though the teacher and aide were understanding, accepting, and concerned, the activity was highly structured. The teacher and aide supervised and guided the activities throughout the observation period. The free play was of short duration. Freedom of choice on the part of the students was thus limited.

The teacher and aide, however, seemed to view each child as unique. They were responsive to individual differences. Their interaction with the students appeared to facilitate the development of self-esteem and positive feelings. Interaction with other adults was fostered; interaction with other children was also fostered, but to a lesser degree.

Both the teacher and aide moved among the students, asking questions, offering suggestions, and adding ideas. Positive guidance techniques were used to redirect students to more acceptable behavior.

Program C

In this program, the teacher and the aide directed the activities of the students. The parents assisted the staff and/or observed the activity program. The teacher provided an environment that encouraged exploration (within limits). The teacher seemed to believe strongly in adult supervision and, in a limited way, in adult participation during play activities.

The environment was organized to facilitate learning through exploration and interaction with other adults and other children. For example, several activity centers were organized in one of the rooms in which the program was housed. Every child participated in each activity for a designated period of time. By the end of the period, all had experienced each activity. Self-selection of materials was not part of the structure; however, students were free to use the materials in any way they wished during the allotted time period. The teacher, aide, and parent helpers were responsible for one or more of the activity centers. In this way, the environment was prepared to incorporate learning through exploration by the student and interaction with other adults and other children.

The students appeared to be adjusted to this organizational pattern. The experiences appeared to stimulate learning in physical, social, emotional, and intellectual areas. It was notable that students did not object when they moved from area to area, nor was concern shown when beautiful block constructions were destroyed by the in-coming student or group of students. One little girl, who obviously preferred one particular activity, willingly complied with the organizational pattern when she was told that her turn would come. She was watchful, however, of the time schedule, and reminded the teacher to call for a change of activity at the scheduled time.

Summary of Programs A, B, and C

For Programs A, B, and C, students were expected to be physically and mentally active. Adult supervision was a major component of the organizational pattern. Adults were expected to use positive guidance techniques by modeling and encouraging expected behavior, redirecting children to more acceptable behaviors, and setting clear limits. At the same time, the adults accepted and encouraged the students to express their opinions and ask questions.

In conclusion, the three programs exhibited varied organizational patterns. Most dominant characteristics observed are shown in Table 2.

TABLE 2
ECIA Chapter 1 Preschool Project Program Structure

Play Activities

Program	A	B	C
General Characteristics	Play is recreational and social (Individualistic approach.)	Play is recreational. (Group approach though some free play is permitted.)	Play has a skill orientation and is directed.
Student Role	Select play area. Free to explore.	Select play area only on occasion.	Play area assigned. (Student selects within the play area.)
Adult Role	Supervise, minimal involvement.	Supervise, guide, direct.	Supervise, guide but permit student freedom to experiment and explore.

Types of play areas: housekeeping, construction (blocks, cubes), art, science, library, etc.

Skill Learning Activities

Program	A	B	C
General Characteristics	Teacher directed, usually individualized.	Teacher directed, usually a group approach.	Teacher directed, usually individualized.
Student Role	Students work independently, receive help when they request or when performance problems are evident.	Teacher directs students actions; students respond to the teacher.	Students experiment, explore, question, and discuss.
Adult Role	Facilitator and Guide	Facilitator and Guide	Facilitator and Guide (Direction largely relegated to preplanning.)

The three preschool program designs exhibited varied levels of currently recommended developmental approaches to Early Childhood Education. Although positive social/emotional development effects can be noted, it is not possible to draw a strong conclusion as to the effectiveness of these particular program approaches as related to student cognitive development. Play as a cognitive tool is most evident in Program C. Yet the amount of adult preplanning and actual direction and the lack of student self-selection activities precludes the designation of this program as completely developmental according to NAEYC determinants.

Questions with reference to all three programs are: How well is the groundwork being laid for self-determination on the part of the students? Will the students be too dependent on adult presence and attention as they move through elementary school? Additional information concerning these students as they proceed through kindergarten and primary grades could provide valuable information in this area.

Certainly it is recognized that students must progressively assume the responsibility for their own education if optimal achievement is to result. To what degree is Early Childhood Education making its contribution to the achievement of this goal? Additional evaluation research is needed to answer these questions.

Summary

Three Educational Consolidation Improvement Act (ECIA) Chapter 1 schools implemented a preschool program during the 1988-89 school year. The enrollment ranged from 15 to 20 students per class. In two schools, the students attended half-day sessions. Each teacher taught two classes, one in the morning and one in the afternoon. In one school, a full day program was implemented for 15 students.

Eight observations were conducted. The number of students in attendance during the observations ranged from 14 to 19 students. Each program was observed two or three times. The observations were conducted between February and May. Though most of the observations were conducted in the morning, two were conducted in the afternoon: the full day program and one of the half-day programs. Both were observed during the morning and afternoon sessions. Each observation period lasted 30 minutes.

During each observation, classes were conducted by teachers assisted by teacher aides. The number of parents ranged from two to eight. In one program six, seven, or eight parents were present during each of the three observations.

Students worked independently as well as received direct instruction from the teacher. The teachers moved among the students, asking questions and receiving responses as well as encouraging students to ask or answer questions.

All of the teachers had a good working relationship with their students. They encouraged them and communicated well with them while maintaining discipline. Any disciplinary measures observed were constructive in nature.

The students were responsive to the instructional program. They were cooperative, appeared to understand what was expected of them, displayed initiative and independence, were eager to participate in the class activities, and stayed on task throughout the period.

Materials were varied. Learning kits, manipulatives, toys, and in one instance, special science materials were noted. Seldom were conventional materials such as worksheets and the blackboard observed in use.

Both play and skill learning activities were noted in each of the three preschool programs. In two of the programs, play, as observed, was recreational and social, while in the third program, play had a learning skill orientation. In one program, students were completely free to choose play activities; in a second program, self-selection was limited; while in the third program, students were permitted freedom of selection within play areas preassigned by the teacher. Parents supervised the play in one program as caretakers, while the teachers of the other two programs served as guides and facilitators during the play activities.

Skill learning activities were directed by the teacher in all three programs. Teacher aides assisted the teachers. In one program, parents also assisted in the skill activities. The students were usually directed by the teacher in a second program. In that program, interaction between teacher and students was largely student response to teacher inquiry or request. In the third program, skill learning and play activities were intermingled.

Conclusion

The three preschool program designs exhibited varied levels of the currently recommended developmental approach to Early Childhood Education. Although positive social/emotional development effects can be noted, it is not possible to draw a strong conclusion as to the effectiveness of these particular program approaches as related to student cognitive development. Play as a cognitive tool was most evident in one of the programs. Yet the amount of adult preplanning, actual direction, and the lack of student self-selection of activities precludes the designation of this program as completely developmental according to criteria presented by early childhood advocacy groups. Additional information concerning the students in the three preschool programs as they proceed through kindergarten and the primary grades could provide valuable insights in this area.

BASIC OCCUPATIONAL AND ACADEMIC SKILLS TRAINING (BOAST)

Prepared by Lydia Williams

The Basic Occupational and Academic Skills Training (BOAST) program served students in selected Education and Vocational Guidance Centers (EVGC) who were serious underachievers in reading as well as other academic areas and were transferees from an ECIA Chapter 1 school.

BOAST is a Chapter 1 pullout program. That is, it provides an organizational structure that allows students to leave their regular classrooms to receive supplementary instruction in reading and mathematics as well as vocational experiences in fully equipped industrial shops. The shops included, but were not limited to, multiservices, offset printing, and home skills. Shop activities were combined with instruction in reading and math, career awareness. To ensure the students' safety, BOAST shop teachers were qualified in their respective shop speciality.

Program Evaluation

Program evaluation included an assessment of the BOAST program's implementation and effectiveness (the extent to which objective[s] were met); a determination of probable causes for failure to meet the objective(s); a summary of the program's strengths and limitations; and recommendations for improving the program.

Evaluation data were provided by a review and analysis of classroom observations, a teacher questionnaire, and attendance rosters that included both the students' attendance as well as their final grades. The evaluation report was prepared to meet federal and state requirements for accountability and to disseminate information requested by school personnel and administrative staff.

Program Implementation

All BOAST programs were visited between November 1988 and the close of school in June 1989. Visits ranged from as few as one in one center to as many as four in another. There was a total of 19 visits made to BOAST classrooms, grades six through nine.

During classroom visits, it was observed that students were most often directly involved in vocational skill development (providing underachieving students with marketable skills while remediating academic skill was the primary focus of the BOAST program). Also, both students and teachers appeared to have a good working relationship. The teachers were most often observed interacting with students while providing either individualized or small-group instruction. No implementation problems were cited by teachers either informally or on the "comments" section of the teacher questionnaire. None of the teachers was new to the program. Prior problems, if any, had already been resolved, and anticipatory problems were dealt with expediently.

According to the ECIA Chapter 1 application, the projected enrollment for BOAST was 322 students. Student enrollment forms were submitted for 302 students. Class membership ranged from 10 to 24 students per classroom. Student attendance during observations ranged from 35 percent to 92 percent. On the average, attendance for the BOAST program was estimated to be 64 percent of the students present at the time of the evaluator visits.

During fiscal 1989, BOAST operated within the regular academic program of five EVGCs. Various types of vocational shops were offered from school to school. Only offset printing was offered at one school and home management (including foods, clothing and child care) at another. The remaining three BOAST schools offered multiservices. The multiservices program was not limited to one trade, but usually encompassed units devoted to working in several industrial trade areas, such as metals, plastics, woods, and rubber. In one school, printing and drafting were combined with the trade areas.

BOAST programs combined instruction in vocational and academic (primarily reading) skills within the BOAST classroom. In one school, the BOAST classes were divided between two teachers to ensure that students received intensive instruction in reading. Twenty students attended a BOAST class as part of their regular schedule. This 20-member group was divided into two 10-member sections. In three-week blocks, one 10-member section attended a BOAST shop while the other group attended a required supportive reading class. This interchange continued throughout the school year. One teacher commented that the periodic switching of classes was beneficial to those students whose attention span was short. Because they were under pressure to complete projects before their three-week time line expired, the students did not appear to become bored and they seemed anxious to return to begin another project.

Observations were made of both the shop and reading classes. Lessons were presented using the whole-class format. According to the evaluator, while the lessons were presented clearly, well-organized, and appropriate to students' ability, they did not seem to hold the students' interest. The objective of the lesson was stated, the lesson was explained, and questions asked in summary. Encouragement of students' questions, questioning that required higher order thinking skill, equitable response opportunities, and differentiated instruction were not noted during the presentations.

During observations, the subject area most frequently observed, as expected, was the vocational shop. Students were found involved in trades projects, and no formal lesson was presented by the shop teacher.

The observations indicated the 88 percent of the projects provided an appropriate application experience and seemed to be related to the current instruction. Teacher requests for student responses occurred about half as often as student requests for teacher assistance. In 94 percent of the observations, the teacher moved among and interacted with the students to ask or answer questions.

In all observations, students appeared to have a good working relationship with their teachers. In 78 percent of the observations, the teachers encouraged students, while in 22 percent of the observed classes no such encouragement was noted. In 94 percent of the observations, teachers communicated well with their students. Discipline was maintained in 89 percent of the classrooms during the observation, and no incidences arose that required disciplinary measures.

In nearly 60 percent of the observations, teachers did not spend most of the time providing direct instruction. The amount of time spent on noninstructional tasks was less than five minutes in all of the observations.

In 76 percent of the observations, the activity began promptly. Transitional time was kept to a minimum in 71 percent of the observations. Pacing cues were provided for those students working independently in 88 percent of the observations. In 65 percent of the observations, most of the teacher's time was spent either in small-group or in individualized instruction. None of the BOAST classes was assigned a teacher's aide.

During the observations, it was observed that all of the students appeared to be cooperative, displayed initiative and independence, and stayed on task. In 94 percent of the observed classes, the students appeared to understand what was expected of them and were eager to participate in the learning activity.

Program Effectiveness

One method used to determine program effectiveness was an evaluation of the extent to which the BOAST program met its objectives. These objectives were in the areas of basic academic skill, vocational skills, motivation, and behavior. Progress in academic skills was to be measured by the gains made by the students in their annual achievement tests. Because BOAST is an elementary transitional program, students were required to take the *Iowa Tests of Basic Skills* (ITBS). Once these students graduate and enter high school, they are required to take the *Tests of Achievement and Proficiency* (TAP) the following school year. Because testing in the high school was changed from fall to spring during the evaluation year, data to assess achievement gains for EVGC graduates were not available.

One proposal considered for the BOAST program was that students whose native language was not English would enhance their English language skills. The objective stated:

> *At least 75 percent of the students placed in bilingual instruction categories A and B at the beginning of the school year will advance to at least the next higher category by the end of the school year.*

Student enrollment information indicated that 11 students placed in bilingual categories were enrolled in the BOAST program. Information on the objective for advancement to the next higher category will be reported when available.

Another program objective focused on student attendance. This objective stated:

> *At least 80 percent of the students will attend the program on at least 90 percent of the scheduled school days.*

The underlying premise was that students who participated in a training program in which they acquired vocational skills that they viewed as marketable would be motivated toward better school attendance.

Data were reported for students enrolled at four of the five schools. Of the BOAST students for whom program attendance figures were available, 59 percent had an attendance rate of 90 percent or better for the year. Table 1 presents an analysis of student attendance in BOAST classes. While only 59 percent met the criterion, over 75 percent appeared to have good attendance in the program (80 percent or better).

One teacher indicated that attendance in her class was usually excellent, but during the winter months many students were absent and near the end of the school year students missed classes to participate in other school-related functions. This may account for the moderate number of students who achieved the program attendance objective.

TABLE 1
Program Attendance Rates

Attendance rate	Number of Students	Percent
100%	3	2
90 - 99%	91	57
80 - 89%	27	17
60 - 79%	25	16
40 - 59%	6	4
20 - 39%	5	3
0 - 19%	4	2
Total	161	101*

* Excess due to rounding.

The final objective of the BOAST program was student acquisition of vocational skills. This objective stated:

> *At least 50 percent of the students will receive a rating of good or better on the quality of their vocational work.*

Letter grades assigned by the class teacher were used to determine the quality of the students' work, with A, B, or C denoting good or better. It should be noted that the letter grade could represent much more than a student's achievement in vocational work. In grading, a teacher might give consideration to attendance, attitude, class participation, cooperation, neatness, etc. It was decided that, in the absence of a rating scale and instructions to the teachers to consider only the quality of the vocational work in their grading, the assigned grade would serve as the representation of a student's performance in the vocational program.

Table 2 shows the range of letter grades assigned to the students (for whom grades were reported) in the BOAST program. The number of students who received a letter grade of C or better well exceeded the expectation of 50 percent. In fact, 71 percent of the BOAST students received at least a C as their grade.

TABLE 2
Assigned Grades of BOAST Students

Grade/ Description	Number Received	Percent
A = Superior	4	2
B = Excellent	27	17
C = Good	83	52
D = Poor	34	21
F = Failure	13	8
Total	161	100

ECIA Chapter 1 guidelines require that all BOAST teachers are qualified in their respective specialty. The teacher questionnaire addressed this issue by asking the teachers to outline their training and experience in their vocational specialty. It was found that all teachers returning the questionnaire were not only educationally trained in their areas but also had over 15 years of teaching experience in the vocational field.

The teacher questionnaire further asked what measures teachers had taken to ensure students' safety in their classes. The most frequent responses cited were the assignments of seats and equipment and having fire extinguishers and first aid kits readily available. All teachers mentioned safety rules. The techniques cited for relaying safety rules were (1) discussions with their classes on hazardous conditions and the seriousness of adhering to safety rules; (2) strict enforcement of these rules; (3) dissemination of written safety rules; (4) training students to react in the event of an accident with fire; and (5) practice in administering first aid.

The BOAST program required that teachers combine reading instruction with shop instruction. When asked how this was done, teachers most often mentioned the subject textbook and indicated the use of both oral and silent reading exercises which reinforced comprehension and inferential and deductive reading skills. Some teachers also mentioned assignments that incorporated the use of supplementary materials such as magazines and newspapers. Others mentioned vocabulary exercises emphasizing definitions of technical terms and sentence application. In addition to reading instruction, program guidelines stated that career awareness would be combined with shop instruction. On their questionnaire, teachers were asked to describe the techniques they used for combining these two areas. Most often mentioned were films and filmstrips on the practical uses of a specific skill. Also stated was career counseling on job opportunities requiring skills the students learned.

One teacher stated that her program had been recognized by the district office as exemplary. Four of her students entered their clothing projects in the annual Vocational and Technological Exhibit at the Museum of Science and Industry. For two consecutive years, her program received a grand award. The teacher's programs also received an Outstanding in the Field award, and two first place awards went to individual students. Further, this teacher provided her students with experience in child care by initiating a Big Brother/Big Sister program in cooperation with children in the Head Start classes. The teacher felt that such an activity provided practical, hands-on experience for students who may not have had younger brothers and sisters and also heightened their awareness of child development.

Conclusions

The number of students served in the BOAST program during the 1988-89 school year reached 94 percent of anticipated program capacity.

Providing profoundly underachieving students with marketable skills while remediating their academic skills was the program's primary focus. During visits to the program, students were most often observed directly involved with vocational skill development. Overall, students and teachers appeared to have a good working relationship. Teachers were most often observed interacting with students while providing either individualized or small-group instruction.

No implementation problems were cited by teachers either informally or on the "comments" section of the teacher questionnaire. None of the teachers was new to the program. Prior problems had already been resolved and anticipatory problems dealt with expediently.

Changes in the citywide testing schedule created a shortage of data with which to assess the BOAST program objectives. Data were not yet available on the English-language objective, which applied to too few students to make a valid assessment. The objective which focused on student attendance was not met. A final objective which dealt with the quality of the students' vocational work well exceeded the set criterion.

Recommendations

The following recommendations are based on the findings for the BOAST program:

- Data collected for this program are insufficient and procedures used for objective assessment may or may not be appropriate. Therefore, definitive statements regarding program effectiveness should not be made at this time.

- Program objectives, as stated, should be examined for appropriateness and modified where necessary. While the criteria for these objectives seem reasonable, the rational for each objective should be reconsidered. Moreover, techniques should be developed for measuring each objective that will yield useful information.

- The assistance of a teacher aide in this program may prove useful. While the program guidelines spell out the duties and responsibilities of a vocational assistant, none of the programs had one. The additional staff person could not only be supportive to the shop teachers in promoting order and discipline but also could be helpful with the maintenance of student records and the completion of various other required government forms. This would give BOAST teachers more time for direct instruction and could possibly increase the number of students the program can serve.

- Program continuation is strongly recommended on the basis of teacher qualifications, student attendance, and observed and reported student response to the program.

TEACHER OPINIONS

Prepared by Nancy I. Hiestand

Teachers were given the opportunity to express their opinions about the ECIA Chapter 1 program at the end of the 1988-89 school year. Questionnaires were distributed to all teachers of pullout and self-contained classes and to a sample of teachers who sent students to Chapter 1 classes. Students usually attended pullout classes one period a day; the students in the self-contained classes remained with the same teacher the full day.

The questionnaires were returned by 1,560 teachers: 326 pullout program teachers, 373 self-contained program teachers, and 861 non-Chapter 1 teachers who sent students to Chapter 1 classes. Responses of the three groups were compared and contrasted in the areas of inservice training, materials, instruction, student improvement, and effects of in-school mobility and class cancellations. The responses of the pullout and self-contained program teachers were compared regarding the separate instructional approaches used.

Responses were usually given on a four-point scale, ranging from least positive (1) to most positive (4). The tables report the mean (average) and the number (in parentheses) of teachers who responded to the item. In some cases, percentages are reported. The tables showing pullout teacher responses give overall results by item as well as for each of the instructional models (either school-created or developed by vendors) that were in use in 1988-89. Information about small pullout programs with a small number of responses is summarized below the columned data.

The teachers found the inservice activities, materials, and instructional settings satisfactory. Slow delivery of materials was a frequently noted problem.

Teachers held differing views about student improvement. The pullout teachers thought that 71 percent of their students had improved in academic skills. Self-contained program teachers said that 81 percent had improved in reading and 83 percent in mathematics. Non-Chapter 1 teachers' estimates were lower: 67 percent of their students were thought to have improved in reading and 68 percent in mathematics. These estimates need to be validated by comparison with the standardized achievement test data for 1988-89.

Self-contained program teachers saw maintenance of previous levels of classroom and social behavior or improvement in 81 percent of their students; non-Chapter 1 teachers, in 62 percent of their students.

Inservice Training

Most pullout teachers agreed that the number of meetings pertaining to their programs was sufficient and that the training improved their instruction and procedures. They rated the vendor consultant service 3.2, above "good" on the scale. Teachers of Small-Group Eclectic programs were in the greatest agreement (3.4) that the number of meetings was sufficient, and teachers in the Bhards/New Century (2.8) and Wasatch (2.4) programs in least agreement. Teachers in each pullout instructional program were in substantial agreement that the training they received was helpful. Service from the six named vendor programs was rated good or better, 3.0 or above. Eclectic and Other Single Vendor/School Created programs were less likely to receive vendor service, and, on average, rated that service 2.9 (see Table 1).

TABLE 1
ECIA Chapter 1 Pullout Program Teacher Opinion about Inservice Training

Agree/Disagree: Range = 1 to 4 (Strongly Agree)	Small-Group Eclectic		Prescription Learning		New Century/Bhards		National School Services		Other Single Vendor or Sch.-Created		Overall	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Number of meetings sufficient	3.4	(156)	3.2	(68)	2.8	(24)	3.3	(23)	3.2	(29)	3.3	(324)
Training improved instruction, procedures	3.3.	(154)	3.0	(68)	3.1	(24)	3.0	(23)	3.2	(29)	3.2	(322)
Rating of: Range = 1 to 4 (Excellent)												
Service from vendor consultant	2.9	(50)	3.3	(60)	3.0	(20)	3.4	(22)	2.9	(17)	3.2	(189)

WICAT (N=4) Means were 3.5 or higher.
Wasatch (N=5) Mean for sufficient number of meetings = 2.4; otherwise, 3.8
Curriculum Computer Corp. (N=8) Means ranged from 3.2-3.8.

Teacher in self-contained programs agreed that the number of meetings concerning their programs was sufficient and the training helped them. The means of 3.2 and 3.1 on these items were slightly lower than those given by the pullout teachers but were still in the "agree" range. The self-contained program teachers rated the Chapter 1 inservice meeting they attended as beneficial (3.0). Assistance from the district Chapter 1 coordinator was rated 2.9 (see Table 2).

TABLE 2
ECIA Chapter 1 Self-Contained Program Teacher Opinion about Inservice Training

Agree/Disagree: Range = 1 to 4 (Strongly Agree)	Mean	N
Number of meetings sufficient	3.2	(362)
Training improved instruction, procedures	3.1	(363)
Rating of: Range = 1 to 4 (Highly Beneficial)		
Assistance from district Ch. 1 coordinator	2.9	(336)
Ch. 1 inservice meetings	3.0	(360)

Materials

Pullout teachers agreed overall that the quantity of materials for their programs met their needs, that the materials were appropriate for their students, and that the maintenance of program equipment was adequate (ratings of 3.2 or higher). Materials were rated very highly overall on variety and quality of audiovisual equipment, computer software, and hardware. Vendor repair service was rated slightly lower, (3.3), but still within the "good" range. There was least agreement that delivery of materials was timely. The overall mean was 2.4, in the "disagree" range. Among the separate programs, only Wasatch, with five responses, was in the "agree" range on timely delivery, and Prescription Learning was close, at 2.9 (see Table 3).

TABLE 3
ECIA Chapter 1 Pullout Program Teacher Opinion about Materials

Agree/Disagree: Range = 1 to 4 (Strongly Agree)	Small-Group Eclectic		Prescription Learning		New Century/ Bhards		National School Services		Other Strgts. Vendor or Sch.-Created		Overall	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Quantity met my needs	3.3	(154)	3.4	(68)	3.2	(24)	3.4	(29)	3.4	(23)	3.3	(322)
Delivery timely	2.7	(154)	2.9	(68)	2.5	(24)	2.1	(28)	2.1	(28)	2.4	(320)
Appropriate for students	3.5	(156)	3.9	(68)	3.5	(24)	3.5	(29)	3.5	(25)	3.5	(324)
Maintenance of equipment adequate	3.3	(77)	3.2	(65)	3.4	(23)	3.2	(19)	3.2	(19)	3.3	(224)
Rating of: Range = 1 to 4 (Excellent)												
Variety of materials	3.7	(147)	3.7	(66)	3.6	(24)	3.5	(23)	3.7	(28)	3.7	(311)
Audiovisual equipment	3.5	(114)	3.6	(53)	3.5	(23)	3.8	(14)	3.6	(22)	3.6	(241)
Instructional software	3.6	(106)	3.6	(66)	3.7	(24)	3.6	(21)	3.8	(25)	3.7	(261)
Quality of computer hardware	3.6	(98)	3.7	(65)	3.7	(24)	3.9	(22)	3.8	(25)	3.7	(254)
Vendor repair service	3.1	(45)	3.3	(61)	3.5	(24)	3.6	(19)	3.1	(19)	3.3	(187)

WICAT (N=4) All means were 3.5 or higher except "Delivery timely" = 2.5.
Wasatch (N=5) All means above 3.6.
Computer Curriculum Corp. (N=8) Mean for "Delivery timely" was 2.8; Other items: 3.0 to 4.0.

Self-contained program teachers agreed (mean of 3.1) that the materials for their classes were appropriate, but they were less in agreement with the statement that the quantity met their needs (mean of 2.7). They rated the supplementary Chapter 1 materials as beneficial (3.5). The mean of 2.0 showed that they disagreed with the statement that delivery of materials was timely. About 63 percent of the self-contained program teachers said they selected their materials, although this responsibility was also carried out by others (see Table 4).

TABLE 4
ECIA Chapter 1 Self-Contained Program Teacher Opinion about Materials

Agree/Disagree Range 1 to 4 (Strongly Agree)	Mean	N
Quality met my needs	2.7	(364)
Delivery timely	2.0	(355)
Appropriate for students	3.1	(361)
Rating of Range = 1 to 4 (Highly Beneficial)		
Supplementary Ch. 1 Materials	3.5	(347)
Materials were selected by:		
		%
Responding teacher		63
Other teacher		29
Principal		18
Assistant principal		12
Other		14

Most of the non-Chapter 1 teachers stated that the opportunity to use materials not available in the regular classroom was beneficial to their students who attended pullout classes (mean of 3.6). Non-Chapter 1 teacher opinions about Chapter 1 class materials were similar (within the" beneficial" range) among the separate instructional approaches (see Table 5).

TABLE 5
Non-Chapter 1 Teacher Opinion about Materials

Rating of: Range = 1 to 4 (Highly Beneficial)	Small-Group Eclectic		Prescription Learning		New Century/ Bnards		National School Services		Other Single Vendor or Sch.-Created		WICAT		Wasatch		Computer Curr. Corp.		Overall	
Opportunities for students to use materials not available in regular classroom	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
	3.6	(355)	3.7	(181)	3.6	(52)	3.9	(42)	3.7	(45)	3.7	(18)	3.8	(17)	3.6	(76)	3.6	(836)

Instruction

The majority of pullout teachers agreed with the statement that they were familiar with the objectives of the program (mean of 3.8), were able to individualize instruction (mean of 3.5), and, to a lesser extent, involved in the design of their local Chapter 1 program (mean of 3.3). Among the separate instructional models, teachers in Bhards/New Century and National School Services were less involved with their local school Chapter 1 design than average, and the Eclectic and Other Single Vendor/School-Created program teachers, more involved (see Table 6).

Immediate feedback to students was the instructional aspect given the highest rating by pullout teachers overall (mean of 3.8 = excellent). Most of the other components were also rated as highly. Pullout teachers were less positive overall about the correlation of their program with sending teachers (3.5) and availability of diagnostic information (3.3). The scores of the separate pullout programs on these items remained within the "good" range (3.1 or higher) (see Table 6).

Table 6
ECIA Chapter 1 Pullout Program Teacher Opinion about Instruction

Agree/Disagree: Range = 1 to 4 (Strongly Agree)	Small-Group Eclectic		Prescription Learning		New Century/ Bhards		National School Services		Other Single Vendor or Sch.-Created		Overall	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Familiar with program objectives	3.8	(157)	3.8	(68)	3.8	(24)	3.6	(29)	3.7	(29)	3.8	(325)
Involved in local program design	3.4	(156)	3.4	(68)	3.2	(24)	3.1	(22)	3.4	(28)	3.3	(322)
Able to individualize instruction	3.5	(156)	3.5	(68)	3.5	(24)	3.5	(23)	3.5	(29)	3.5	(323)
Rating of: Range = 1 to 4 (Excellent)												
Diagnostic information	3.3	(126)	3.4	(60)	3.5	(24)	3.1	(22)	3.1	(25)	3.3	(279)
Management of instruction	3.7	(141)	3.7	(65)	3.8	(24)	3.8	(22)	3.7	(29)	3.7	(304)
Sequencing of learning skills	3.7	(146)	3.7	(66)	3.6	(24)	3.5	(23)	3.8	(29)	3.7	(310)
Immediate feedback to students	3.8	(153)	3.8	(64)	3.9	(23)	3.8	(23)	3.7	(29)	3.8	(315)
Small class size	3.8	(148)	3.7	(63)	3.7	(23)	3.5	(22)	3.7	(26)	3.7	(301)
Individualized instruction	3.7	(150)	3.7	(65)	3.8	(23)	3.7	(23)	3.7	(27)	3.7	(311)
Flexible groupings	3.6	(146)	3.8	(66)	3.6	(19)	3.6	(23)	3.6	(25)	3.7	(298)
Diverse instructional strategies	3.8	(149)	3.7	(65)	3.4	(22)	3.6	(23)	3.6	(28)	3.7	(310)
Correlation w/regular clsrm teacher	3.6	(149)	3.4	(67)	3.1	(24)	3.1	(22)	3.5	(29)	3.5	(313)
Conferences with sending teachers	%	(156)	%	(68)	%	(24)	%	(23)	%	(28)	%	(323)
5 or more	70		47		25		57		57		59	
3-4 times	22		34		63		30		39		29	
1-2 times	6		18		8		13		4		10	
Never	2		1		4		-		-		2	

WICAT (N=4) All means were 3.5 or higher.
Waiatch (N=5) All means were 3.2 or higher.
Computer Curriculum Corp. (N=8) All means were 3.4 or higher.

About 59 percent of the pullout teachers said they met 5 or more times with the sending teachers of their students in 1988-89. Among teachers in the separate instructional programs, Eclectic teachers said they met most frequently with sending teachers; Bhards/New Century teachers reported the fewest conferences (see Table 6).

While self-contained teachers reported less familiarity with program objectives (mean of 3.4 on the "agree" scale) and less ability to individualize instruction (mean of 3.1) than pullout teachers, these scores are still within the positive range. The lowest score appears in their involvement in local program design (mean of 2.5). Self-contained program teachers rated reduced class size (mean of 3.9) the most beneficial instructional aspect, although individualized instruction (mean of 3.7) and opportunity to use diverse teaching strategies (mean of 3.6) also ranked high. About 43 percent of the self-contained program teachers used computers for instruction, most often in the teaching of reading and mathematics (see Table 7).

TABLE 7
ECIA Chapter 1 Self-Contained Program Teacher Opinion about Instruction

Agree/Disagree: Range = 1 to 4 (Strongly Agree)	Mean	N
Familiar with program objectives	3.4	(362)
Involved in local program design	2.5	(355)
Able to individualize instruction	3.1	(363)
Rating of: Range = 1 to 4 (Highly Beneficial)		
Reduced class size	3.9	(363)
Individualized instruction	3.7	(356)
Diverse instructional strategies	3.6	(355)
Class uses computer for instruction		
	%	
Yes	43.0	(367)
(Which subjects?)	%	(158 = 43% of 367)
Reading	94	
Math	73	
Writing	15	
Other	15	

Non-Chapter 1 teachers (84 percent) indicated that the goals of Chapter 1 programs attended by their students had been explained to them. Student progress reports had been received by 86 percent of the teachers. Approximately 79 percent felt that Chapter 1 correlated with their instruction. Regular conferences with the pullout teachers were reported by 73 percent (see Table 8).

More than 90 percent of the non-Chapter 1 respondents had program goals explained and progress reports sent to them by Bhards/New Century and National School Services. Opinions differed concerning program correlation and conference frequency among the various instructional approaches (see Table 8).

Non-Chapter 1 teachers felt overall that the individualized and supplementary instruction aspects of the pullout programs were most beneficial (mean of 3.6). All other areas--information on student progress, correlation with regular program, and contribution to overcoming academic deficiencies--were also rated in the "beneficial" range (see Table 8).

TABLE 8
Non-Chapter 1 Teacher Opinion about Instruction

	Small-Group Eclectic		Prescription Learning		New Century/ Bhards		National School Services		Other Single Vendor or Sch.-Created		WICAT		Wasatch		Computer Curr. Corp.		Overall	
(Percent saying "yes")	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
Program goals explained to me	86	(362)	82	(187)	94	(53)	93	(43)	82	(45)	89	(18)	82	(17)	77	(77)	84	(853)
Student progress reports provided	87	(363)	83	(187)	94	(53)	95	(43)	87	(46)	89	(18)	88	(17)	79	(77)	86	(855)
Regular conferences with pullout teacher	79	(361)	67	(185)	87	(52)	93	(43)	67	(46)	89	(18)	69	(16)	59	(75)	73	(847)
Program correlated with my instruction	83	(361)	73	(134)	81	(52)	93	(43)	73	(45)	83	(18)	65	(17)	73	(75)	79	(845)
Ratings of: Range= 1 to 4 (Highly Beneficial)	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Information on student progress	3.4	(352)	3.3	(176)	3.5	(53)	3.5	(42)	3.2	(43)	3.3	(18)	3.5	(17)	3.2	(75)	3.3	(822)
Correlation with reg. classroom instruction	3.4	(350)	3.1	(183)	3.2	(52)	3.5	(43)	3.2	(45)	3.4	(18)	3.2	(17)	3.1	(76)	3.3	(832)
Individualized instruction	3.6	(357)	3.6	(183)	3.7	(53)	3.8	(40)	3.8	(44)	3.8	(18)	3.7	(17)	3.5	(77)	3.6	(834)
Supplementary instruction	3.6	(357)	3.5	(179)	3.6	(53)	3.7	(42)	3.5	(46)	3.8	(18)	3.5	(17)	3.3	(77)	3.6	(839)
Contribution to overcoming academic deficiencies	3.4	(358)	3.3	(183)	3.5	(52)	3.5	(43)	3.3	(46)	3.6	(18)	3.4	(16)	3.2	(75)	3.4	(839)

Student Improvement

More than half (54 percent) of the pullout teachers overall estimated that 80 percent or more of their students had shown definite improvement in the skills taught in their program. Similar estimates were seen in four of the individual instructional approaches. More of the Other Single Vendor/School-Created program teachers (75 percent) said that 80 percent or more of their students had improved. Overall, pullout teachers estimated 71 percent of their students improved in Chapter 1 program skills. Because data for WICAT, Wasatch, and Computer Curriculum Corporation are based on a small number of responses, they should be interpreted with caution (see Table 9).

In the area of stimulation of student interest, all programs rated well. The overall rating was 3.7 (see Table 9).

TABLE 9
ECIA Chapter 1 Pullout Program Teacher Opinion of Student Response to Program

Teacher opinion of percent of students who showed definite improvement in the skills taught in the program:	Small-Group Eclectic (N=154)	Prescription Learning (N=68)	New Century/ Bhards (N=23)	National School Services (N=23)	Other Single Vendor or Sch.-Created (N=28)	WICAT (N=4)	Wasatch (N=5)	Computer Curr. Corp. (N=8)	Overall (N=319)
	%	%	%	%	%				%
80% or more	51	50	52	52	75	Mean=70%	Mean=80%	Mean=76%	54
70%	21	23	30	44	14				23
60%	16	9	9	4	4				12
less than 60%	11	18	9	-	7				11
									Mean=71%
Rating of: Range = 1 to 4 (Excellent)	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean
Stimulation of student interest	3.7 (148)	3.7 (66)	3.4 (23)	3.6 (23)	3.8 (28)	3.8 (4)	3.8 (5)	3.6 (8)	3.7 (311)

Self-contained program teachers were asked to rate student progress in reading and mathematics. Approximately 73-75 percent of the teachers estimated 80 percent or more of their students had improved. Overall, 81 percent of the students improved in reading and 83 percent in mathematics (see Table 10). In addition, teachers in self-contained programs estimated that 81 percent of their students maintained their status or improved in classroom and social behavior (see Table 10).

TABLE 10
ECIA Chapter 1 Self-Contained Program Teacher Opinion of Student Response to Program

Teacher opinion of percent of students who improved in:	
Reading Achievement	%
80% or more students	73
70%	11
60%	5
less than 60%	11
	Mean = 81 (N=361)
Mathematics Achievement	%
80% or more students	75
70%	9
60%	5
less than 60%	11
	Mean = 83 (N=354)
(Maintained or improved in) Classroom and Social Behavior	%
80% or more	71
70%	13
60%	2
less than 60%	14
	Mean = 81 (N=346)

Non-Chapter 1 teachers also commented on student improvement. The teachers (51-52 percent) estimated that 80 percent of their students had improved in reading and mathematics. An average of 67 percent of Chapter 1 students improved in reading and 68 percent improved in mathematics. In the area of classroom and social behavior, non-Chapter 1 teachers estimated that 62 percent of their students had maintained their previous level or improved (see Table 11).

TABLE 11
Non Chapter 1 Teacher Opinion of Student Response to Pullout Program

Teacher opinion of percent of Ch. 1 students who improved in:	Small-Group Eclectic	Prescription Learning	New Century/ Bhards	National School Services	Other Single Vendor or Sch.-Created	WICAT	Wasatch	Computer Curr. Corp.	Overall
	%	%	%	%	%	%	%	%	%
Reading Achievement									
80%	49	50	69	49	52	65	47	54	51
70%	11	9	10	23	3	6	13	4	10
60%	4	4	2	-	3	-	7	11	4
less than 60%	36	37	19	28	41	29	33	32	35
	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N
	66 (274)	63 (159)	76 (48)	72 (39)	68 (29)	75 (17)	67 (.6)	69 (56)	67(664)
Mathematics Achievement									
80%	49	49	67	57	50	42	75	68	52
70%	9	6	-	18	7	17	-	6	8
60%	7	5	22	4	-	-	12.5	3	6
less than 60%	36	40	11	21	43	42	12.5	23	34
	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N
	66 (135)	63 (67)	80 (9)	76 (28)	62 (14)	68 (12)	79 (8)	76 (31)	68(322)
(Maintained or improved in) Classroom and Social Behavior									
80%	45	44	65	32	57	40	67	49	46
70%	11	9	9	29	3	7	-	2	10
60%	2	3	2	10	3	-	-	9	3
less than 60%	41	44	23	29	37	53	33	40	41
	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N
	62 (256)	59 (132)	71 (43)	68 (31)	68 (30)	59 (.6)	71 (12)	65 (45)	62 (595)

Teacher Ratings of Other Aspects of the Chapter 1 Program

Pullout teachers agreed that they were satisfied with the physical aspects of their classrooms, giving an overall rating of 3.3 (see Table 12). For the most part, their classes were conducted in regular rooms; exceptions were the Eclectic and Other Single Vendor/School-Created programs. Overall, about 20 percent of the pullout teachers said their classes were cancelled for various reasons more than 10 times in 1988-90. The percentage of teachers in Other Single Vendor/ School-Created programs who reported 10 or more cancellations was higher, 37 percent. Table 12 shows the cancellation rates for the separate pullout programs.

TABLE 12
Selected Items from the ECIA Chapter 1 Pullout Program Teacher Questionnaire

	Small-Group Eclectic (N=154)	Prescription Learning (N=64)	New Century/ Bnards (N=24)	National School Services (N=22)	Other Single Vendor or Sch.-Created (N=28)	WICAT (N=4)	Wasatch (N=5)	Computer Curr. Corp. (N=8)	Overall (N=316)
Where program is located.	%	%	%	%	%	%	%	%	%
Regular classroom	72	91	92	91	75	100	100	100	80
Other	28	9	8	9	25				20
Rating of: Range= 1 to 4 (Strongly Agree)	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N	Mean N
Satisfaction with physical aspects of classroom	3.3 (155)	3.4 (68)	3.2 (24)	3.3 (23)	3.5 (29)	3.8 (4)	3.4 (5)	3.4 (8)	3.3 (322)
Estimate of times class was cancelled half-day or longer in '88-'89	(N=154)	(N=66)	(N=24)	(N=22)	(N=27)	(N=4)	(N=5)	(N=8)	(N=317)
	%	%	%	%	%				%
Never	9	12	4	5	7	1 room,	2 rooms	Fewer	8
1-2	27	26	17	14	7	10+	10+	cancel.	24
3-5	29	30	33	45	26	cancel.	cancel.		31
6-9	18	8	21	23	22				17
10 or more times	17	24	25	14	37				20

Teachers in self-contained programs were asked how often they served as substitutes. While 43 percent said "never" and 21 percent said "once or twice," the rest indicated they were called upon many more times (see Table 13). More than half of these teachers sent students to other classes each day, and 9 percent said the departures interrupted instruction more than occasionally.

TABLE 13
Selected Items from the ECIA Chapter 1 Self-Contained Program Teacher Questionnaire

Times served as substitute	%	
Never	43	(N=364)
1-2	21	
3-4	14	
5-7	10	
8 or more times	11	
Times per day one or more students leave for other instructional services	%	(N=371)
None	45	
1	41	
2	10	
3	2	
4 or more times	1	
Departures hinder, interrupt instruction (for these students)	%	(N=367)
Never	62	
Occasionally	29	
Frequently	5	
Always	4	

About 24 percent of the Non-Chapter 1 teachers estimated that the Chapter 1 classes for their own students were cancelled 10 or more times. Other Single Vendor/School-Created and WICAT programs seemed to have been cancelled most often (see Table 14). Departures of students to Chapter 1 classes were "never" a hindrance to instruction, according to 52 percent of these teachers, although about 10 percent of the non-Chapter 1 teachers said students leaving was an interruption more that occasionally, about the same percentage given by the self-contained program teachers.

Non-Chapter 1 teachers were also asked if it would be more advantageous to their students not to go to Chapter 1 classes. Although 11 percent thought their students would be better served most of the time by remaining in their regular rooms, 46 percent said it would never be better to stay and 43 percent said that only occasionally would it be better to remain in the regular room rather than going to Chapter 1 instruction (see Table 14).

TABLE 14
Other Items from the Non-Chapter 1 Teacher Questionnaire

	Small-Group Eclectic	Prescription Learning	New Century/ Bhards	National School Services	Other Single Vendor or Sch.-Created	WICAT	Wasatch	Computer Curr. Corp.	Overall
Estimate of times Chapter 1 classes for own students were cancelled in '88-'89	%	%	%	%	%	%	%	%	%
Never	4	5	4	2	2	12	6	8	5
1-3	34	40	33	35	37	12	35	36	35
4-6	29	20	27	21	6	35	24	21	25
7-9	10	11	6	30	11	6	18	13	11
10 or more	22	24	31	12	44	36	18	21	24
	(N=364)	(N=185)	(N=52)	(N=43)	(N=46)	(N=17)	(N=17)	(N=75)	(N=848)
Departures of students to pullout classes interrupt instruction									
Never	50	54	51	58	48	59	71	51	52
Occasionally	43	36	41	35	33	35	23	30	38
Frequently	4	8	8	5	11	6	6	9	6
Always	3	3	-	2	9	-	-	9	4
	(N=358)	(N=182)	(N=53)	(N=43)	(N=46)	(N=17)	(N=17)	(N=76)	(N=842)
How often students would be better served in own classroom rather than in pullout class									
Never	49	46	49	54	44	29	50	32	46
Occasionally	44	42	40	39	38	53	38	50	43
Frequently	5	10	6	7	13	6	6	12	8
Always	2	2	6	-	4	12	6	5	3
	(N=347)	(N=183)	(N=53)	(N=41)	(N=45)	(N=17)	(N=16)	(N=74)	(N=825)

Summary

The opinions of 1,560 teachers about the ECIA Chapter 1 program in 1988-89 were summarized in this report. Questionnaires were returned by 326 pullout program teachers, 373 self-contained program teachers and 861 non-Chapter 1 teachers who sent students to Chapter 1 classes. Responses of the three groups were compared and contrasted in the areas of inservice training, materials, instruction, student improvement, and in-school mobility and effects of class cancellations. The responses of pullout and self-contained program teachers are compared among the separate instructional approaches used.

Inservice training was assessed sufficient and helpful by both pullout and self-contained program teachers.

Pullout teachers rated their materials positively. Self-contained program teachers were less satisfied with the quantity of materials available to them. Both groups of teachers stated that the materials were not delivered in a timely manner. Non-Chapter 1 teachers found the Chapter 1 materials to be beneficial to their students.

These teachers were knowledgeable about the goals of the Chapter 1 program, though the self-contained program teachers were less likely than pullout teachers to be involved in the design of their local school Chapter 1 program. Ratings of Chapter 1 program characteristics such as immediate feedback to students, small class size, and individualized instruction were high.

Differences were noted between pullout and non-Chapter 1 teachers on the number of conferences held and correlation of instruction between the Chapter 1 and regular classroom teacher. The non-Chapter 1 teachers were less likely than pullout teachers to report that conferences were held regularly.

Teachers held differing views about student improvement. The pullout teachers thought that 71 percent of their students had improved in program skills. Self-contained program teachers said that 81 percent had improved in reading and 83 percent in mathematics. Non-Chapter 1 teachers' estimates were lower: 67 percent of the students were thought to have improved in reading and 68 percent in mathematics.

In the area of classroom and social behavior, self-contained program teachers saw maintenance of previous levels or improvement in 81 percent of their students, and non-Chapter 1 teachers, in 62 percent of their students.

The data indicate that pullout classes were prone to being cancelled to a greater degree than self-contained classes, and that the pullout teachers were frequently used as substitutes.

Conclusions

A review of the questionnaire data has led to the following conclusions. Overall, the teachers related to the Chapter 1 program found the inservice activities, materials, and instructional settings satisfactory. Slow delivery of materials, however, was a frequently noted problem.

The self-contained program teachers gave higher estimates of student improvement in achievement than the pullout teachers, perhaps because they were with their students the full time and had more opportunity to observe their students in a small-class setting. Non-Chapter 1 teachers saw much less improvement. These estimates need to be validated by comparison with the standardized achievement test data for 1988-89.

Recommendations

Teacher of pullout classes and non-Chapter 1 teachers perceived differences in the separate instructional approaches. For example, more inservice training seems to be needed in the Bhards/New Century and Wasatch programs.

Materials must be delivered more promptly.

Self-contained program teachers need to become more familiar with Chapter 1 goals and more involved in their local school Chapter 1 design.

The correlation of instruction between pullout and regular classes should continue to be emphasized.

The number of class cancellations and uses of Chapter 1 teachers for other duties should be reduced.

C.

SUPPORTIVE SERVICES

OPTION 1 - INSTRUCTIONAL LABORATORIES FOR THE TEACHING OF SCIENCE, ART, OR CREATIVE ARTS

Prepared by Arnold Stewart

The Instructional Laboratories for the Teaching of Science, Art, or Creative Arts option provides a supportive service for eligible Chapter 1 students. The program is staffed by itinerant teachers who move from school to school, bringing their expertise in either science, art, or the creative arts to the students. During the 1988-89 school year, 26 schools enrolled 2,915 students in the program, with a majority of the schools selecting the Teaching of Reading through Science component. Of those teachers responding to evaluation questions, more than 80 percent reported that the students enjoyed the activity and it increased their interest in schoolwork. Less than five percent of the responding teachers indicated that their students did not enjoy the experience. Supportive Services Option 1, therefore, met its evaluation objective.

OPTION 2 - FIELD EXPERIENCES

Prepared by Arnold Stewart

The Field Experiences option provided eligible students with field trips to introduce them to community resources, promote constructive use of leisure time, and expand their awareness of possible career opportunities. Chapter 1 teachers and teacher aides provided the students with orientation and follow-up activities before and after the trips. During the 1988-89 school year, approximately 14,000 students participated in the program.

Of the Chapter 1 teachers in self-contained programs (N=155) that responded to the questionnaire, 71 percent indicated that 80 percent or more of their students enjoyed the field trips and subsequently showed an increased interest in their schoolwork. The average estimate was 71 percent. Over half of the non-Chapter 1 teachers (N=337) who responded to their evaluation questionnaire said 80 percent or more of their Chapter 1 students enjoyed the trips and subsequently became more interested in schoolwork. Their average estimate was 63 percent. Although many students appeared to benefit from Supportive Services Option 2, the overall numbers were not sufficient to meet the evaluation objective.

OPTION 3 - OUTDOOR EDUCATION AND CAMPING

Prepared by Arnold Stewart

The Outdoor Education and Camping option provided coeducational outdoor camping experiences as a supportive service for participating students. Approximately 1,500 students from 37 schools took part in the camping program. The activities, which take place in a natural setting, correspond closely with the home school curriculum and enable students to apply classroom learning activities to practical life experiences.

Approximately 40 percent of the 57 Chapter 1 teachers in self-contained classes who replied to an evaluation questionnaire stated that 80 percent or more of their students enjoyed camping and their experiences resulted in increased interest in schoolwork. The average estimate was 55 percent.

Non-Chapter 1 teachers who sent their students to Chapter 1 pullout classes were also questioned about the activity. While 31 percent (N=179) replied that 80 percent or more of their students enjoyed camping, another 45 percent indicated that only a few (20 percent or less) of their students enjoyed the experiences. These teachers estimated, on average, that 47 percent of their students who attended the outdoor camp increased their interest in schoolwork. The overall estimates of student enjoyment and stimulation of interest in school were not sufficient to meet the evaluation objective.

OPTION 4 - SCHOOL COMMUNITY IDENTIFICATION

Prepared by Viola Guice

The School Community Identification option is designed to develop closer relations between the parents and teachers of Chapter 1 students. Through the program, school-community representatives (SCRs) act as liaison persons between school and home. They advise the parents on how to help their children function more effectively in school and assist the teachers in understanding the home environment and its effects on school performance. These activities are accomplished through home and classroom visits. SCRs also refer families to social service agencies, sponsor parental workshops, and tutor students under the direction of the Chapter 1 teacher.

During fiscal 1989, School Community Identification programs were operative in 183 elementary schools, 5 high schools, and 12 Child-Parent Centers. The 280 school-community representatives in these schools served students, preschool through high school, and parents; however, the number of Chapter 1 students served was dependent on the intensity of the service desired. Approximately one-third of the SCRs also served some non-Chapter 1 students, and about one quarter served non-English-speaking students.

Evaluation questionnaires were returned by 153 SCRs, representing 119 schools. From the questionnaires, it was determined that the responding SCRs had worked as school-community representatives, on average, for 11 years (range = 1-23 years) and had spent an average of 10 years at their current school. About 79 percent of the SCRs were members of their Local School Parent Advisory Council. About 57 percent reported they had an office that afforded some degree of privacy; however, 21 percent said they had little privacy.

About half of the schools had one assigned SCR, 39 percent had two, and 11 percent had more than two. The median number of Chapter 1 students served by an SCR was 80 (range = 10-240 students).

The SCRs reported that they performed the following duties (those performed most frequently listed first):

- Maintained a daily log
- Monitored student attendance
- Assisted Chapter 1 parents to help their children
- Sponsored parent workshops
- Referred families in need to other agencies
- Tutored pupils.

Students and families were referred to the responding SCRs in nearly all cases by the classroom teacher and often by the principal or through contacts with the child in and out of the classroom.

The responding SCRs, on the average, made approximately 140 home visits per year. Most often, during these visits, they spoke with the parents about their child's academic progress, how to improve attendance and behavior, and how the parent could help the child with homework. Less often, they gave parents information about other agencies or talked over the child's health.

The responding SCRs, on the average, reported that they discussed 75 to 100 percent of the students on their roster with the children's teachers. Attendance, academic progress, and the home visit were the topics discussed most often. Of the responding SCRs, 94 percent said that information about students was shared with other supportive staff, such as the social worker, counselor, or truant officer. Only about nine percent of the SCRs said they were never involved in conferences concerning their students.

Program Effectiveness

The School Community Identification option has been in existence for 23 years. The following evaluation objective was established for the 1988-89 school year:

> *At least 80 percent of the teachers whose students were served by the school-community representative will report increased awareness of the home situation and instructional needs of their students.*

Evaluation questionnaires received from 182 Chapter 1 teachers of self-contained classes and 394 non-Chapter 1 teachers who sent students to Chapter 1 classes were available for an assessment of the SCRs. In these questionnaires, approximately 87 percent of the Chapter 1 teachers and 75 percent of the non-Chapter 1 teachers agreed that they had gained an understanding of their students' home situation from the SCRs. About 87 percent of the Chapter 1 teachers and 82 percent of the non-Chapter 1 teachers agreed that because of the SCRs' efforts they became more aware of their students' instructional needs. Overall, 81 percent of the teachers agreed with these statements; therefore, the evaluation objective was met.

Conclusion

Data indicate that school-community representatives perform a variety of duties related to the well-being of Chapter 1 students. A majority of teachers of Chapter 1 children agree that the services of the SCRs made them more aware of their students' home situations and educational needs.

Recommendation

Because of the effectiveness of the SCI program, substantiated from the data gathered, it is recommended that the program be continued.

OPTION 5 - HEALTH SERVICES

Prepared by Lydia Williams

The Health Services option was designed to assist in the identification of any major health problem that might affect a student's achievement and to provide parents with the referrals and information necessary to obtain treatment for the student. The option served students who were participants in an ECIA Chapter 1 instructional program.

The Health Services medical team comprised consulting physicians, school nurses, public health nurses, health aides, a laboratory technician, and a vision and hearing tester. This medical team conducted complete physical examinations. An administrative team, including the administrative coordinator and a medical stenographer, provided management and clerical assistance to the medical team.

The physicians, the director of school nurses, and the administrative coordinator provided inservice training for the health team. Topics were determined according to relevancy, the medical team's interests, and local needs.

Program Implementation

Health Services served students in 15 schools: 14 public and one nonpublic school. A total of 393 students received complete physical examinations. Children who received the medical examinations were selected in advance by the principal in cooperation with parents, the school nurse, and classroom teachers. An ECIA school nurse offered assistance in the selection process. Students identified for examination ranged from as few as four in one school to as many as 55 students in another. These students' grade levels ranged from kindergarten in two schools to the upper grades in five schools. Students in six schools were at the primary to intermediate grade levels.

In recent years, the number of schools selecting the Health Services option has declined. Subsequently, fewer students are being scheduled for examinations. Table 1 shows a steady decline in both the number of participating schools and the number of students served over the past seven years. Fiscal 1989 had the lowest student participation since the program's inception. The number of schools participating in 1989 decreased to about a quarter (15 schools) of the original number of schools. This reduction was perhaps the largest within a single fiscal year.

TABLE 1
Participating Schools and Students Served: Fiscal Years 1983 - 1989

Fiscal Year	Number of participating schools	Number of students served
1989	15	393
1988	14	856
1987	22	538
1986	20	596
1985	22	777
1984	29	974
1983	54	1,917

Each participating school was scheduled for student examinations on a designated day. On that day, students, with a signed parental consent slip, were transported to the Educational Diagnostic Center or the central office's medical section and returned to school by a health aide. Parents were encouraged to accompany their children, especially those in primary grades. The parents who did were involved in a health education presentation and an explanation of the follow-up procedures.

Program Effectiveness

The Health Services component had one objective which stated:

> *All students found to have health problems will be referred for the appropriate treatment.*

An analysis of the Health Services records revealed that of the students who were given physical examinations and were found to have health problems, 70 percent were referred for follow-up treatment. Table 2 indicates the outcomes of the health services provided to students. It can be seen from the table that 141 students (36 percent of those examined) were found to have medical problems. Among these students, 174 medical problems were diagnosed. Referrals for follow-up services were made for 98 students (70 percent of the 141 students with medical problems).

TABLE 2
Health Services Outcomes

Service	N
Students given physical examinations	393
Students found with medical problems	141
Medical problems diagnosed	174
Students referred for follow-up	98

Fifteen different types of medical conditions were identified among the students examined (see Table 3). Eye and vision problems were overwhelmingly the most prominent problem. Other more frequently diagnosed problems dealt with immunizations which were given to 15 students and most often involved the polio vaccine; obesity was found in 22 cases, but seems to have declined in recent years; lung problems were predominantly those of the upper respiratory track. No cases of pneumonia were reported; skin problems were mostly acne that had progressed to various stages.

The remaining medical conditions involved very small numbers of students. In nine cases, lead was diagnosed as being the source of problems in students' nervous system, along with four cases of scoliosis causing orthopedic problems. Only a few children were found to need dental care. Very few cases were found to be undernourished and/or with hypertension, and no cases of asthma were diagnosed. Laboratory testing was performed in 14 cases to determine hematocrit, proteinuria, and glucose.

TABLE 3
Health Problems Identified and Number of Cases Found

Health Problem	Number of Cases Found
Eye and vision	58
Immunization	26
Obesity	22
Lungs (upper respiratory/bronchitis/other)	11
Skin	10
Ear and hearing	10
Nervous system (lead)	9
Congenital heart murmur	8
Orthopedic	5
Dental	4
Allergies	4
Undernourished	3
Hypertension	2
Diabetes and endocrine	2

During an interview with the director of Health Services, there was no mention of problems in program implementation. Mention was made, however, of budgetary problems that have persisted since the program began. Each year, the uncertainty of the option's funding allocation has created problems in planning for the next school year's activities. The fluctuation in budget has caused an annual adjustment in personnel due to salary raises and increased medical costs. It was the perception of the program director that as the pressure for demonstrated gains on standardized achievement tests increased, schools that otherwise may have selected the Health Services option purchased computers instead. This became apparent with the option's loss of participating schools despite the increase in funding allocations. Further, it was believed that the rising costs of medical services and supplies have become a deterrent.

An interesting issue raised by the program director was that schools did not take advantage of the resources available through this health program. The health team was prepared to assist schools in determining inoculation needs; the staffing of special education students; and serving as educational resources in physical education classes, health fairs, and career awareness programs. The health team understood these services as part of their responsibilities, but few schools request them.

Conclusions

Serving students with special health needs that might affect their academic progress remains the primary focus of this program. As the number of participating schools continues to decline, both funding and personnel experience major changes annually; yet, services provided to students are expected to remain constant. For example, the program's budget is based on a per student cost. When fewer schools select the program, fewer students are served, and, unless the federal allocation increases, the operating budget is reduced. Increases in medical costs also cause reductions in paraprofessional staff.

Additionally, the carryover of funds from other budget lines has often resulted in increased funds which often arrive at odd times of the year that neither permit planning for their use nor acquiring the staff needed, especially since these additional moneys may not be available in the subsequent year.

The schools' underuse of the health team as a resource to raise student awareness of the importance of good health may have taken a back seat to computers. If good health is essential in order for children to reach their highest potential, professional health care services and preventive health education should be just as important as remediation of basic skills. The tendency of schools not to request the supportive services of the health team has implications. It is possible that principals have not been made aware that these health resources are available. Another reason could be that since only ECIA eligible students can be served by the health team, principals may not wish to take the time to ascertain if the entire membership of a physical education class, for example, meets the guidelines for participation in Health Services.

Recommendations

The following recommendations are based on the findings for this option:

- A service as vital as this to the well-being of students should not have to ponder its fate each year. Program administrators should determine whether or not this program option should remain operative and, if so, establish guidelines to provide it with a set budget or a regular percentage of the yearly funding allocation.

- Modification of the program objective is necessary. Presently it is stated as an absolute. The objective should state a reasonable criterion by which to measure the rate of referrals made for follow-up.

- Program evaluation should be extended to include on-site visits for observations of the clinical procedures (in accordance with guidelines for professional ethics and privacy), the health education classes, and the staff inservice meetings; more extensive interviews with administrative staff; surveys of principals to determine their perceptions of the services, their reasons for not using the Health Services team as educational resources, and the extent to which the school follows up on the referrals made; and a survey of parents to obtain their opinions of the health services provided their children.

OPTION 6 - FINE ARTS

Prepared by George Dalin

The Fine Arts option provided diversified activities to incorporate the arts into education. Specifically designed materials and culturally enriching activities were offered by the Urban Gateways Arts for Learning program to provide students, teachers, and parents with art-related projects not available in the regular curriculum.

Eight one-hour classroom sessions were held with the artist teaching the students. Three collaborative meetings were conducted in which the artist met with the teacher participants, and one parent workshop was scheduled by the artist in which the artist taught parents one or more of the residency activities. One field trip was scheduled for all student and teacher participants.

Field evaluators used four observation instruments to collect data on the following components: artists' classroom instruction sessions, teachers' and artists' inservice meetings, parent workshops, and in-school performances. In addition, two questionnaires were used to measure the program objective. One questionnaire was sent to non-Chapter 1 teachers and another to Chapter 1 teachers.

Teacher Collaborative Meetings

Three teachers-and-artist meetings were held in each of the participating schools with the classroom residency component. When field evaluators observed six different collaborative meetings, they found that artists and teachers discussed such issues as remedies for problems in earlier classroom residency sessions, culminating and follow-up activities, and ways to integrate residency activities into the regular classroom curriculum. In these observed meetings, artists provided time for teachers to voice their concerns about residency sessions. Discussions about student projects and progress were prevalent. Many teachers asked questions about the artists' lessons, professional work, and opinions relative to their artistic medium.

Residency Classroom Observations

Data reported here, using the *Residency Classroom Observation Form*, were based on 27 classroom observations (30 minutes each) of 23 different Arts for Learning residencies. These residencies were divided among the following programs: theater arts, literary arts, music, and movement and dance. Following are the observations of the artists' interaction with students and teachers and the classroom teachers' role during the classroom residency sessions.

- Artist's Presentations and Interactions. In the past years, artists usually developed operational objectives while teaching rather than stating objectives or goals before instruction began. During the 1988-89 school year, 66 percent of the observed artists stated lesson objectives or goals before teaching, while nearly 60 percent of the artists used objectives or goals during the act of teaching. The increased practice of stating objectives or goals before teaching made artists' lessons clearer for teachers and students. Artists, in some classes, also used operational objectives to reinforce stated objectives. Learning outcomes, however, were evaluated against goals and objectives in only 41 percent of the observed classes.

- Clarity of Presentation. In more than half (55 percent) of the observed sessions, artists conducted an adequate review of previously learned material. (It should be noted that several of the observed artists were conducting their first class session; therefore, they did not review material, but some artists questioned students about their experiences.) Nearly 90 percent of the artists developed their lessons in a step-by-step sequence, and their directions and instructions were clear and concise. Artists' presentations to the student groups were, in the vast majority of cases, visibly and audibly clear. They also demonstrated and applied skills or concepts contained in the prescribed lesson (in 81 percent of the classes). In more than 60 percent of the observed sessions, artist-student interactions were restricted to lesson content; in the remaining class sessions artists talked about their professional experience, and, in a few cases, disciplined students' inappropriate behavior.

- Practice and Feedback on Skills. The majority of observed artists (93 percent) gave their students opportunities to practice skills or visualize concepts. In all but one observed session, artists involved all students in class activities. Moreover, artists, (85 percent) provided assistance to students' requests, and most artists, (70 percent) checked all students' work. Praise of students' work and responses by approximately 89 percent of the resident artists helped to provide an atmosphere conducive to learning.

- Classroom Teacher's Role During the Residency Session. During the classroom artists' residency sessions, many of the teachers (85 percent) strove to involve all students in class activities as well as to assist the artist. About 70 percent of the observed teachers supervised students' seat work and held students accountable for their work. Overall, teachers (74 percent) conveyed enthusiasm for the residency to their students.

In summary, field evaluators rated most of the artists' presentations as educationally sound. In particular, artists were prepared to present their lessons and had sufficient materials for all student participants. Generally, artists had good rapport with students and teachers. Various modes of communication were observed; artists discussed, demonstrated, questioned, explained, and rehearsed. Most students seemed to enjoy their assignments or activities. In a few classes artists could not sustain interest throughout the session, yet most artists demonstrated instructional techniques which kept students' attention and interest.

Program Objectives and Outcomes

ECIA Chapter 1 teachers in self-contained classroom programs and teachers who sent students to Chapter 1 pullout programs rated the effectiveness of Urban Gateways' field trips and residency classroom sessions. Teachers who responded to Chapter 1 teacher questionnaires were asked to give the percentages of students who enjoyed their enrichment experiences and those who increased their interest in schoolwork as a result of the Urban Gateways experiences.

When asked to estimate the percent of their students who benefited from an Urban Gateways Art for Learning residency, and, as a result, increased their interest in schoolwork, non-Chapter 1 teachers (N=304) responded that 63 percent of their students who attended Urban Gateways field trips and 60 percent who took part in classroom residency sessions benefited. Self-contained classroom teachers (N=257) indicated, on average, that 70 percent of their students enjoyed the field trips, and 68 percent of these students increased their interest in schoolwork.

The program outcomes seemed to be more successful for students in the self-contained program. Teachers in this particular program may have participated to a greater degree than did the non-Chapter 1 teachers. Nevertheless, the majority of teacher respondents from both groups believed that their students benefited from the residency program in which they participated.

Parent Training Workshop

Training was made available to parents, with one parent workshop scheduled for each residency. Artists engaged parents in their particular residency activities, usually by demonstrating, explaining, directing, and/or reviewing residency student-related activities. In seven observed workshops, artists effectively guided and involved most parent participants.

Parent participants were willing to do physical activities so they could use them at home with their children. Artists generated parent interest by presenting a brief lesson which stimulated parent questions and discussions.

Conclusions

The social and organizational climates in the majority of the observed Urban Gateways residency components were conducive to students', teachers', and parents' learning and enjoyment. Continued improvement of services was part of the fiscal 1989 program. Artists used a variety of materials and aids to foster participants' engagement in each of the components. The program objective, however, was only partially met, which may reflect some of the teacher participants' reluctance to include residency activities in their classroom instruction.

Recommendations

Based on the observations of the Urban Gateways Arts for Learning program as well as the results of the questionnaires, the following recommendations are made:

- Artists need to increase their emphasis on learning outcomes.
- A more reasonable criterion for program success would be that the teacher respondents would claim that 70 percent of their students would benefit from the program and increase their interest in schoolwork.
- Given the evidence of artists improving their residencies over the past several years and the large percent of students, who, in the opinion of their teachers, have benefited, it is recommended that Urban Gateways supervisory staff and artists-in-residence continue to provide residencies that best meet the needs of Chapter 1 students, teachers, and parents.

OPTION 7 - PARENT INVOLVEMENT

Prepared by Marion Rice

The Parent Involvement component was designed to encourage parents to participate in school-related Chapter 1 activities. In addition, many Parent Involvement programs were intended to teach parents ways to help their children with academic needs, both at school and at home.

A variety of ways were employed in which parents of Chapter 1 pupils were encouraged to become involved in their children's Chapter 1 instructional program: they were asked to visit classrooms, talk with teachers and principals, examine Chapter 1 instructional materials, exchange ideas with other parents, become members of the Chapter 1 local school councils, and assist in the planning and preparing of the local school Chapter 1 program design. They were asked to help their children at home using methods often suggested by the Chapter 1 program. Parent involvement was an integral part within the framework of the Chapter 1 project.

Program Description

A questionnaire was distributed to teachers who were in the self-contained, as well as the pullout, Chapter 1 classrooms. Three hundred and seventy self-contained and 326 pullout teachers responded to a series of questions related to parental involvement.

Within the parent involvement program, schools were allowed to allocate funds for supporting parent involvement activities, e.g., providing a stipend to parents. Teachers who had a stipendiary parent working with them were given a special questionnaire related to the activities of that stipendiary parent. Responses were received from 61 teachers.

A parent questionnaire was distributed to parents of pupils participating in self-contained and pullout Chapter 1 classes. Responses were received from 347 English self-contained, 43 Spanish self-contained, 720 English pullout and 131 Spanish pullout programs.

Implementation

The 103 Chapter 1 schools which had budgeted additional funds under the Parent Involvement option could choose from among several activities. The type of parent involvement program that was implemented varied from teacher-devised to vendor-devised.

In some teacher-devised programs, a teacher and teacher aide, (under the supervision of the principal), had the responsibility of administering the program based on the needs of the participating parents and their children. Within the vendor-devised programs, materials and training programs that had been developed by vendors and community agencies were used to assist in the implementation of the local school's program. Many other modifications and adaptations of the above approaches were also found within the various Chapter 1 schools.

The Parent Involvement option had a component that allowed parents to be paid a stipend to defray any cost involved in assisting in a Chapter 1 classroom. If parents received this stipend, they were to work a minimum of two days per week and only with a Chapter 1 teacher. They were to provide services directly related to pupil instruction for those pupils participating in a basic instructional Chapter 1 activity. They were not to provide general assistance to the school. In schools that had parents who received this stipend, an inservice training session was designed by that school in order to instruct those parents in how to work effectively with the participating pupils.

Evaluation

In both the self-contained and pullout programs, more than 95 percent of the teachers reported that they sent letters to parents informing them of their child(ren)'s participation in the Chapter 1 programs, as well as invitations to visit the classrooms. Most teachers sent forms, other than the regular report cards, to parents informing them of the pupil's progress in the Chapter 1 program. Almost all teachers communicated with parents through personal conferences about the child(ren)'s needs or problems. However, the overall use of various types of communication tended to be greater in the self-contained programs.

The self-contained and pullout teachers reported that almost all parents visited the classroom on some special occasion, inquired about their child(ren)'s progress in class, and cooperated in monitoring homework. In the pullout programs, the amount of visitations, inquiry, and monitoring was greater than in the self-contained programs; however, the percent who attended conferences in the self-contained programs was slightly higher than in the pullout programs.

For those teachers who had a stipendiary parent working with them, the average number of days of assistance was 101. However, 28 percent of the stipendiary parents were assigned duties that kept them away from their Chapter 1 classrooms for at least four days. For 10 percent of the parents, removal from the Chapter 1 classrooms occurred more than 10 times. Teachers reported that 93 percent of stipendiary parents participated in the required inservice sessions; only 7 percent reported they did not. More than 80 percent of the stipendiary parents were able to help children with school learning by performing the following tasks: preparing lesson materials, tutoring pupils, counseling pupils, escorting pupils, and assisting with school duties. Other ways in which stipendiary parents assisted in the classroom, to a lesser extent, were by performing clerical tasks and talking with the parents. Thus, Objective 15 was met.

Responses on the parent questionnaire indicated that approximately 80 percent of the parents received letters informing them about the ECIA Chapter 1 program and/or received progress reports. Approximately half the parents reported they helped in a Chapter 1 classroom. Most felt that Chapter 1 had made their children more interested in learning and helped them do better in school. Most parents reported that they had checked to see that homework was done, sat down to help their child(ren) with homework, asked what occurred in class, talked to their child(ren) to help in understanding lessons, and had read stories or books to them. As a result of Chapter 1, more than 80 percent of the parents had an increased knowledge of the child(ren)'s needs and an increased ability to assist their child(ren) with schoolwork. Thus, Objective 16 of the formal objectives was met.

Conclusions

Although the efforts of all teachers in terms of informing, inviting, and reporting were great, the overall response in terms of involvement was greater in the pullout programs. In both programs, there was some difficulty with parents actually receiving the information that was sent home about the Chapter 1 program. Nevertheless, parent participation in both programs was reasonably high.

The stipendiary parents received the required inservice sessions and were able to help the children with school learning; however, they were removed from their Chapter 1 instructional duties an excessive number of times.

Recommendations

Some improvement could be made in ascertaining that the parents actually receive the Chapter 1 materials sent home. Also, efforts should be made to decrease the number of times that the parent receiving the stipend is removed from the Chapter 1 classroom instructional activities. The high degree of parent involvement, however, should be maintained.

OPTION 8 - STAFF DEVELOPMENT

Prepared by Nancy Hiestand

The Staff Development option was provided to those Chapter 1 schools that needed a vendor or educational agency to work with local school planning teams to improve delivery of services as well as address specific need related to academic achievement. The agency or vendor provided a staff development specialist. Principals and staff participated in continuous training to improve students' reading and mathematics skills as well as improve parent involvement. Local schools determined the focus of their own program and number of sessions.

According to the ECIA Chapter 1 design for Fiscal 1989, 11 schools planned to conduct inservice training under the Supportive Services option for staff development. Local schools chose a vendor or agency to provide teachers with training in specific needs related to student academic achievement.

A questionnaire was developed in the Department of Research and Evaluation to collect descriptive information about the programs conducted as well as the staff ratings of the activities. The questionnaire was mailed in early June 1989 to principals and 91 teachers who the design indicated would be participating. Returns were received from 52 persons in 10 schools, most of whom were teachers.

Implementation

Training in the teaching of writing was the topic cited most often by 37 percent of the respondents. Among the programs named specifically were "The Process of Writing" at the Chicago Teachers Center; "Writing to Read," the IBM-developed program; and various creative and interdisciplinary writing activities conducted by National College of Education, district staff, and ECIA Chapter 1 staff.

Training was also provided in classroom management systems by National School Services personnel and the Urban Gateways program, "Learning through Theater and Visual Arts." Staff of the Chicago Public Schools offered computer training for teachers involved with the ECIA Bhards/New Century pullout reading laboratories in their schools. Instruction was also given in directed reading and thinking activities.

Most participants said that sessions were held frequently and at varied times and locations. Most emphasis seemed to have been placed on reading and writing skills, along with student and teacher motivation.

Evaluation

Teachers were positive about the supportive inservice training they received. The average of all ratings, 3.4, was halfway between the two most positive choices on the scale; none of the respondents marked the lowest rating. Overall, some 63 percent found the sessions very helpful, 57 percent found the sessions they attended very interesting, and 50 percent said they gained a great deal of knowledge. Approximately two-thirds of the respondents offered comments, 91 percent of which were positive. Typical comments included the following:

- The students were able to write about what they saw in their mind's eye, and to think and write their thoughts.
- It was thrilling to hear kindergarteners laughing and talking to the computer during video "games"...Also to see them typing simple words on the word processors.
- I liked the book fair.
- Research in classroom management was presented.
- I liked interacting in small groups.
- The question-and-answer session was very much needed.
- Activities helped children develop critical thinking.
- Students were stimulated to expand their knowledge of subject matter.
- Wonderful new teaching ideas.

Conclusion

All schools rated their supportive service staff development at the high end of the scale on interest, knowledge gained, and helpfulness of the program. The differences between schools were all within one standard deviation of the mean on each rating scale. The classroom management program given by National School Services in one school and the literacy program provided by National College of Education in another were most highly rated.

Recommendation

Since the data indicate that participating schools found these locally chosen staff development programs to be beneficial, continuation of this option is recommended.

D.

SPECIAL PROGRAMS

FOLLOW THROUGH

Prepared by Marion Rice

The Follow Through program was instituted to sustain gains made by participating pupils in Head Start or a comparable preschool program. Funding is provided jointly by ESEA Chapter 1 and the U.S. Department of Education Appropriation Act, Special Program, with in-kind support from the Chicago Board of Education.

Program Evaluation

The *Iowa Tests of Basic Skills* (ITBS) were administered to Follow Through pupils, grades one through three, to determine achievement in reading and mathematics. Test results are presented in terms of grade-equivalent scores and percent with improved percentile rank.

Program Implementation

Only children from low income families were eligible to receive the full range of comprehensive services provided by the Follow Through program. In fiscal 1989, the program provided kindergarten through grade three students, grouped in classes of 29, with intensive reading instruction. The intensive instruction occurred within the constraints of the time schedules of the two participating schools: Fuller and Terrell elementary schools. Both schools provided full-day kindergarten programs for the participants.

Although staffing patterns differed within each participating school, all classes received the services of a teacher and a teacher aide or school aide. Eligible children were enrolled in the federally sponsored breakfast and lunch programs.

Follow Through has two instructional approaches: the Cooperative Learning Model and the Cultural Linguistic Model. The two approaches provided demonstrative components for other schools interested in adopting the approaches.

Based on the interests and special needs of the local school, a local school parent committee planned the child-parent activities. Parents participated as volunteers and aides in some of the classrooms, in special interest groups, in instructional model workshops, and in inservice demonstrations.

Evaluation Results

The average grade-equivalent gain in reading comprehension on the ITBS for Follow Through students who participated in the program for at least eight months and were not placed in bilingual instructional categories A or B was one year. Of the participating students, 49.7 percent showed an improvement in reading percentile rank. The students' average grade equivalent-gain in Mathematics Total on the ITBS was 1.1 years. Percentile rank improvement in mathematics was achieved by 53.5 percent of the Follow Through students.

Conclusions

The one-year grade-equivalent gain in reading comprehension for Follow Through students compares favorably with the composite average grade-equivalent gain of seven months achieved by all Chapter 1 public school primary students. Similarly, the 49.7 percent with improved percentile rank was higher than the 41.9 percent with improved percentile rank for all Chapter 1 public school primary students.

The grade-equivalent gain in mathematics of 1.1 years was higher than the eight months of gain achieved by all Chapter 1 primary students. The 53.5 percent of Follow Through students with improved percentile rank was higher than the composite average of 43.8 percent achieved by all Chapter 1 primary students.

An analysis of all reading and mathematics scores on the ITBS reveals that on all measures the Follow Through students surpassed the performance of the average Chapter 1 primary student.

Recommendations

Efforts should continue to sustain the gains made by participants in Head Start or other comparable preschool programs. The fine academic performance of the Follow Through students should be maintained. Successful components in terms of staffing and instructional models should be disseminated as demonstration components for other schools interested in adopting these approaches.

FAMILY GUIDANCE CENTER

Prepared by Joseph Schroeder

This report describes the ECIA Chapter 1 Family Guidance Center (FGC) implemented in fiscal 1989. Data concerning the implementation and effectiveness of the FGC from fiscal 1987 through 1989 are also provided. Approximately 570 eligible preschool through eighth grade students and their families were referred for counseling and guidance service during this reporting period.

The Family Guidance Center, located at the Herbert Elementary School, was established as a full-time referral agency in February 1969. FGC has provided counseling and guidance services since that time to students in preschool through eighth grade as well as to their siblings and parents. These services included family counseling, referrals to health and social agencies, psychological examinations and service, and staffing for school inservice and parent meetings.

The center was originally located at 1801 South Ashland Avenue in Chicago. This out-of-school location provided services to families in a suite of offices. Budget cuts caused the center to be moved to an in-school location. Herbert Elementary School offers a suite of offices away from the mainstream of activity within the school. The counseling, psychological, and psychiatric services were offered at no cost to eligible ECIA Chapter 1 students and their families. Students were referred to the center because their behavior in the classroom appeared to be an impediment to learning.

During fiscal 1988, FGC was honored as a nationally recognized ECIA Chapter 1 program. It was one of four exemplary ECIA Chapter 1 programs reported for outstanding achievement by the Chicago Board of Education and one of 116 outstanding programs nationwide recognized by the federal government.

The families receiving the services of the center were scheduled for weekly one-hour sessions. Most were assigned 12 sessions or more. FGC staff consisted of counselors, a head teacher (coordinator), a psychologist, and, on a contractual basis, a psychiatrist. The present arrangement of staff permits about 18 students accompanied by their parents/guardian to receive counseling each week, approximately 200 clients and families per school year.

The sending school was informed of the child's progress in counseling, his/her attendance, and the termination of participation. Principals and teachers of sending schools completed questionnaires to determine if observed pupil behavior had been positively modified. Parental opinion was also analyzed through questionnaire responses.

The center's staff participated in staffing sessions two afternoons a week. The specialized skills of the psychologist and psychiatrist were used to help counseling staff deal with problems they encountered with individual clients. Time was also available for staff to keep abreast of the latest counseling techniques and ways to serve clients with crisis-oriented problems, e.g., death in the family, divorce, and so forth.

FGC also provided inservice training covering crisis intervention, human relations, and counseling techniques to parents, school staff, and administrators. This service was usually provided to the local schools by the coordinator (head teacher) of the center. In addition, approximately 600 principals, teachers, and administrators received a monthly newsletter published and distributed by the center.

Program Evaluation

To determine the center's effectiveness, the FGC staff was surveyed, the center was visited, and FGC records were examined. In addition, questionnaires completed by counselors and parents were collected and analyzed. Results of the school questionnaire, completed by local school staff familiar with the FGC student clients, were analyzed to determine how school performance had changed after leaving the support provided by the center. The assessment took place approximately one month after the student's last counseling session at FGC.

The evaluation sought to determine if the center met the following two objectives:

> *Teachers will report that at least 80 percent of the students maintained acceptable levels of, or improved in, classroom and social behavior.*
>
> *Of the parents receiving services, 80 percent will report increased knowledge of their children's needs and improved ability to help their children with school learning.*

In addition, data were obtained to answer the following questions:

- What, if any, were the problems encountered in implementing and operating the FGC activity?
- How did counselors view the services provided to students? What was their prognosis for most clients?
- What are the needs of the center that will ensure that effective counseling services are provided in the future?

Program Implementation

The Family Guidance Center served eligible Chapter 1 students and their families during the three-year period, 1987-1989, despite cutbacks in staff and funding and a change from a private, out-of-school site to an in-school location. In 1987, 210 students were referred for counseling. Approximately 65 percent of these students were boys. Although children from preschool through eighth grade were eligible for services, about 70 percent of the clients over the past three years were in primary to intermediate grades. At the end of 1987, 41 students remained on the waiting list for counseling. The number of students served in 1988 and 1989 were 180 and 199, respectively. Waiting lists at the end of each of these years had 53 and 63 students, respectively. Waiting lists were generated because of the limited staffing (two to three counselors) and the high demand for the specialized service FGC provides.

In addition to counseling families, the head counselor of the center gave 62 inservice training presentations from 1987 through 1989 to local school staff and parents. During the three-year period, 44 students were referred to other agencies that provided such services as auditory and vision testing, medical attention, and intensive psychiatric care.

Problems arose that caused some difficulties in serving students and their families. During 1988 and 1989, the center operated with two rather than three counselors. In addition, during 1988, the center operated without the assistance of a psychologist who could have provided clients with testing, screening, and counseling services. Staffing was finally increased to three counselors and a psychologist during the middle of 1989.

Another problem for FGC staff resulted from the reduction of the program from a 12-month to a 10-month activity. This caused counselors to terminate counseling during summer months for students who were still in need of the service. This also led the FGC staff to request that students on the waiting list at the end of the year begin counseling the following school year. FGC staff have reported that extra effort was needed to try to get these students back to the center during the next school year and also resulted in from 30 to 40 percent of the students not returning to the center, even though the need for counseling persisted.

Approximately 200 referrals are made yearly. Of these, approximately 30 percent are "no shows" or never begin counseling. Another 20 percent attend one or two sessions, then refuse additional, and often necessary, counseling. Reasons for this lack of attendance include the following:

- Parents work during FGC hours and cannot attend.
- Parents do not think that counseling is necessary.
- Parents will not attend because the center's location is inconvenient.
- Parents refuse to cooperate.

In spite of these difficulties, FGC has provided a valuable service to Chapter 1 students. During school year 1988, FGC was honored as a nationally recognized ECIA Chapter 1 program. In addition, administrators from the Milwaukee school system requested information on and visited the center in order to use it as a model for implementation in their city schools.

Program Effectiveness

Table 1 summarizes staff opinions concerning FGC clients at the conclusion of counseling. A questionnaire was completed by school staff familiar with each student approximately one month after his/her termination at the center. The number of students varied from year to year and did not equal the total number of referrals for each school year because of the ongoing nature of the program and the differences in the number of sessions each student attended.

Table 1 indicates that the majority of students who received FGC counseling improved, particularly in the areas of "willingness to cooperate," "willingness to listen," and "school behavior." Although many students were rated "the same," more than 70 percent of them were given a "yes" for "general improvement" in each of the three school years. When the responses of the school staff are analyzed, the FGC did not meet the objective of at least 80 percent of the students maintaining acceptable levels of, or improving in classroom and social behavior. (In analyzing the FGC program, only "improved" or "no problem" responses were considered as reaching the objective. "Same" indicated no change from the behavior which brought about the initial referral to the FGC.)

TABLE 1
Improvement in Students Who Participated in FGC as Viewed by School Staff

In percentages (N of students)	1987 (N=26)				1988 (N=32)				1989 (N=14)			
	Improved %	Same %	Worse %	No Problem %	Improved %	Same %	Worse %	No Problem %	Improved %	Same %	Worse %	No Problem %
School Behavior	60 (15)	32 (8)	8 (2)	(0)	59 (19)	31 (10)	9 (3)	(0)	57 (8)	29 (4)	(0)	14 (2)
	(N=25)											
School Attendance	35 (9)	38 (10)	(0)	27 (7)	44 (14)	47 (15)	3 (1)	6 (2)	50 (7)	36 (5)	(0)	14 (2)
Attitude Toward School	58 (15)	35 (9)	8 (2)	(0)	40 (13)	59 (19)	(0)	(0)	64 (9)	29 (4)	(0)	7 (1)
Willingness to Cooperate	69 (18)	23 (6)	8 (2)	(0)	56 (18)	37 (12)	6 (2)	(0)	64 (9)	29 (4)	(0)	7 (1)
Willingness to Listen	62 (16)	27 (7)	12 (3)	(0)	53 (17)	40 (13)	6 (2)	(0)	50 (7)	29 (4)	7 (1)	7 (1)
School Progress	50 (13)	38 (10)	12 (3)	(0)	47 (15)	50 (16)	3 (1)	(0)	43 (6)	50 (7)	(0)	7 (1)
Totals	56	32	8	4	50	44	5	1	55	33	1	12
Parental Cooperation	46 (12)	38 (10)	(0)	15 (4)	44 (14)	44 (14)	(0)	12 (4)	50 (7)	29 (4)	7 (1)	14 (2)
General Improvement in Student	Yes %	No %	Too Early to Tell %		Yes %	No %	Too Early to Tell %		Yes %	No %	Too Early to Tell %	
	77 (20)	15 (4)	8 (2)		72 (23)	19 (6)	9 (3)		71 (10)	21 (3)	8 (1)	

Table 2 indicates the responses of parents who completed and returned the parent questionnaire after their child's last counseling session. Approximately 87 percent of the parents reported a "general improvement" in their child during 1987. In 1988 and 1989, respectively, 78 percent and 75 percent of the parents noted a general improvement in their children.

In the area of helping the parents understand their child's needs, 93 to 100 percent of the responding parents reported a better understanding. In addition, more than 87 percent of the parents in each of the three school years reported that FGC counseling helped their family generally. The objective of positive parental response to FGC services was met.

Parents also added comments to the questionnaire that were very positive toward the FGC. Many indicated that the counseling staff not only helped them understand their children better but also helped them understand themselves better. Although a few parents noted that during the three-year program period FGC counseling did not help them or their children, they did indicate that FGC "did everything possible" to help them. Additionally, a few parents each year indicated that they wished they could continue attending the center for continued guidance.

TABLE 2
Parent Questionnaire Results

In percentages (N of students)	1987 (N=23)				1988 (N=27)				1989 (N=13)			
	Improved %	Same %	Worse %	No Problem %	Improved %	Same %	Worse %	No Problem %	Improved %	Same %	Worse %	No Problem %
Child's Home Behavior	74 (17)	26 (6)	(0)	(0)	63 (17)	15 (4)	7 (2)	15 (4)	69 (9)	8 (1)	15 (2)	8 (1)
Child's Attitude Toward Parents	65 (15)	35 (8)	(0)	(0)	48 (13)	37 (10)	(0)	15 (4)	54 (7)	23 (3)	8 (1)	15 (2)
Child's Attitude Toward Siblings	52 (12)	30 (7)	4 (1)	14 (3)	44 (12)	26 (7)	(0)	30 (8)	38 (5)	31 (4)	(0)	31 (4)
Child's Attitude Toward School	52 (12)	39 (9)	9 (2)	(0)	63 (17)	26 (7)	11 (3)	(0)	77 (10)	15 (2)	(0)	8 (1)
Child's Willingness to Cooperate with Parents	61 (14)	35 (8)	4 (1)	(0)	67 (18)	18 (5)	15 (4)	(0)	69 (9)	23 (3)	(0)	8 (1)
Child's Willingness to Listen	43 (10)	43 (10)	10 (2)	4 (1)	48 (13)	30 (8)	15 (4)	7 (2)	62 (8)	38 (5)	(0)	(0)
	Yes %	No %			Yes %	No %			Yes %	No %		
General Improvement	87 (20)	13 (3)			78 (21)	22 (6)			75 (9)	25 (3)	No Response (1)	
Program Helped Parents Understand Child's Needs	100 (23)	(0)			93 (25)	7 (2)			100 (13)	(0)		
Program Generally Helped Family	87 (20)	13 (3)			89 (24)	11 (3)			92 (11)	8 (1)	No Response (1)	

Table 3 indicates the opinions of counselors regarding the counseling of parents and students. Based on these opinions, parents were often less cooperative than their children. Parental cooperation toward counseling improved much less often (15-20 percent) than the student's attitudes (27-38 percent) or willingness to adjust behavior (50-69 percent).

TABLE 3
Counselor Questionnaire Results

In percentages (N of students)	1987 (N=74)				1988 (N=61)				1989 (N=26)			
	Improved %	Same %	Worse %	No Problem %	Improved %	Same %	Worse %	No Problem %	Improved %	Same %	Worse %	No Problem %
Student:												
Counseling Attendance	14 (10)	30 (22)	12 (9)	45 (33)	7 (4)	16 (10)	21 (13)	56 (34)	8 (2)	8 (2)	27 (7)	58 (15)
Attitude Toward Counseling	27 (20)	30 (22)	1 (1)	42 (31)	28 (17)	25 (15)	8 (5)	39 (24)	38 (10)	8 (2)	(0)	54 (14)
Willingness to Participate	24 (18)	28 (21)	5 (4)	42 (31)	39 (24)	25 (15)	5 (3)	31 (19)	38 (10)	15 (4)	4 (1)	42 (11)
Willingness to Adjust Behavior	50 (37)	34 (25)	3 (2)	14 (10)	69 (42)	16 (10)	5 (3)	10 (6)	54 (14)	23 (6)	(0)	23 (6)
Parental Cooperation	18 (13)	24 (18)	11 (8)	47 (35)	20 (12)	28 (17) (N=60)	13 (8)	38 (23)	15 (4)	4 (1)	15 (4)	65 (17)

Conclusions

- Based on the number of referrals sent to the Family Guidance Center over the three year period, there is a need to continue its services.

- Both staff and time have been reduced, which contributes to the sometime persistent problems of the FGC. Although the center is generally effective in providing counseling and guidance services to eligible students and their families, the longer time period and retention of staff would provide more continuity of services to students in need.

- Despite the fact that Family Guidance Center was cited as an exemplary ECIA Chapter 1 program by both the Chicago Board of Education and the federal government during 1988, no attempts to correct problems have been made to increase the effectiveness of the programs.

- Although reports from school staff and cooperating parents indicated that there was general improvement in the majority of students served by FGC, the objective of 80 percent of the students maintaining acceptable levels of improvement in classroom and social behavior was not met.

- A majority of school staff (more than 70 percent) and parents (from 75 to 87 percent) thought there was "general improvement in the child" after completing FGC counseling during the three-year period.

- During the three-year period, a range of 93 to 100 percent of the parents completing the parent questionnaire reported that FGC helped them understand their children's needs. Over 80 percent of the parents indicated that FGC helped the entire family.

- As in the past, activity effectiveness is dependent upon, and determined by, the parents and the degree to which they become involved.

- In addition to providing counseling services, FGC continued to provide information through meetings and a monthly newsletter to interested school staffs, parent groups, and community agencies.

Recommendations

- Funding for the Family Guidance Center should be continued and possibly increased to include the summer months in order to service those students who require continual counseling.

- FGC staff should work closely with school staff, school social workers, and school-community representatives to increase parental interest and involvement.

- Inservice and orientation meetings for eligible schools during 1990 should be continued to ensure continued interest and knowledge of the FGC services available.

PARENTAL INVOLVEMENT AND TRAINING

Prepared by Marion Rice

The Parental Involvement and Training activity provides funds for each participating Chapter 1 school to conduct a two-day training program for parent council members.

For fiscal 1989, Chapter 1 schools with an active parent advisory council invited six parents from the public school, and, if associated with a nonpublic school, three parents from that nonpublic school. Parents received a stipend for their participation in the workshop.

Program Evaluation

The *Parent Advisory Council Questionnaire* was distributed to parent advisory council members in order to evaluate the activity's effectiveness. Responses from 576 English-speaking and 69 Spanish-speaking parent advisory council members were received and tabulated.

Program Implementation

In selecting the parents to be invited to attend the Parental Involvement and Training Workshop, principals gave first preference to parents who were members of the local parent advisory council, had never participated in the workshops, and had children currently enrolled in a Chapter 1 activity. Local parent advisory council members who had attended previous workshops and had children participating in a Chapter 1 activity were given second preference. If the appropriate number of parents for workshop participation was not achieved by selection of the council members, parents of students participating in a Chapter 1 activity were allowed to attend the workshops even if they were not council members.

Planning, scheduling, and conducting the two-day training workshops for the Parental Involvement and Training program was the joint responsibility of the district ECIA Chapter 1 coordinator, the Chapter 1 administrator, and the parent coordinator of the Bureau of ECIA Chapter 1 Programs. The workshops were designed to meet the specific needs of parents in their roles as advisory council members. Participating council members were to gain an improved understanding of the role of the parent advisory councils in Chapter 1 as well as the procedures involved in the planning, development, operation, and evaluation of the Chapter 1 program. Sites and schedules varied in each district, but the programs did not vary significantly from the common goal of meeting the needs of the parent advisory council members.

Program Effectiveness

Responses from the *Parent Advisory Council Questionnaire* indicated that most members had attended at least three council meetings throughout the year and that 80 percent had attended a Parental Involvement and Training Workshop during the 1988-89 school year. Participation in the workshops had helped approximately 80 percent of the parents judge and determine the project's educational needs and assist in developing a school program design. Approximately 90 percent gained an increased understanding of the ECIA Chapter 1 project.

Conclusion

The workshops provided through Chapter 1's Parental Involvement and Training activity appear to have met the needs of the parents in their roles as advisory council members. Parent advisory council members gained an improved understanding of the role of the councils in Chapter 1 and the procedures involved in the planning, development, operation, and evaluation of the Chapter 1 program.

Recommendation

It is recommended that the Parental Involvement and Training activity continue to provide workshops for the parent advisory council members. Revision of the workshops should be considered in terms of changes that have occurred because of school reform and Chapter 1 modifications.

E.

SECONDARY SUPPLEMENTARY SERVICES

LANGUAGE ARTS AND MATHEMATICS LEARNING CENTERS

Prepared by Joseph Schroeder

For fiscal 1989, ECIA Chapter 1 funded 35 high school Language Arts and Mathematics Learning Centers (LAMLC).

The Language Arts Learning Center was designed to improve the academic performance of underachieving students through the remediation of skill deficiencies in reading, writing, speaking, and listening. The program supplemented the regular English I with Support or Introduction to High School English classes. A target enrollment of 3,450 students was set for the centers. Teacher specialists were to determine instruction based on diagnosed needs of each student.

The Mathematics Learning Center was designed to improve academic performance of students through remediation of deficiencies in computation, problem-solving, and application skills. The program supplemented the regular Pre-algebra and Algebra with Support classes. A target number of approximately 2,500 students was anticipated. Teachers diagnosed specific needs and selected materials and strategies that would best meet these students' needs.

Ten of the 35 schools had a combined Language Arts/Mathematics Learning Center. A target enrollment of 1,315 students was anticipated for these centers.

This report provides the findings of an evaluation that addressed the following questions:

- To what degree were the programs implemented? What were the problems, if any?
- How effective were the programs in improving achievement?
- To what degree did the programs meet specific objectives?
- How can the programs be improved?

Program Implementation

Most participants were in ninth or tenth grade. They were selected as participants because of low grades and standardized test scores. The students were scheduled to attend the centers one period each day for the entire school year. In some schools, students were scheduled to attend one semester of language arts and one semester of mathematics. Principals in these schools developed instructional strategies to serve as many students as possible. Information provided by principals and teachers indicates that approximately half of the schools had difficulty reaching or maintaining the target membership anticipated at the beginning of the school year. Largely this was because many students who were enrolled in the centers did not actually attend.

Even though all of the centers had access to computerized instruction, the majority of teachers (66 percent) used an eclectic approach, drawing their instructional strategies and materials from a variety of sources. The remainder of the teachers used vendor-structured instructional programs purchased from companies such as Bhards/New Century, Prescription Learning, and WICAT.

Responses by 27 (77 percent) of the principals or their delegates to an administrator questionnaire indicated that the centers began instruction in September 1989, but not without problems. Though staff and facilities were in place by September, certain problems continued to hinder program effectiveness. In spite of the strengths of the program which included excellent staff and facilities, noted by most principals, the following limitations were also cited:

- High student absenteeism - 23 principals (66 percent)
- Low achievement - 21 principals (63 percent)
- High dropout rates - 10 principals (29 percent)
- Equipment, materials - 7 principals (20 percent)
- Low parent involvement - 6 principals (17 percent).

On-Site Observation

Evaluators visited 35 classes in the Language Arts Learning Centers and noted that a variety of materials was available and in use. The classrooms were adequate in size for student comfort. The mean enrollment for these classes was 17 students; the mean attendance was 12 students or 70 percent.

In approximately 50 percent of the observations, direct instruction was presented to the students by the teacher. Vendor-supplied instructional laboratories were observed in approximately 34 percent of the classrooms. Students in these labs were observed to be generally on task, working independently at computers. In classrooms where teachers used a variety of instructional materials, some students were observed at computers; however, the majority of teachers employed whole class instruction.

Teachers demonstrated excellent rapport with their students, no serious discipline problems were reported, and, except for two rooms, the learning environment was businesslike. During most observations, students were on task.

A survey of attendance books during classroom visitations showed that approximately 35 percent of the students did not attend regularly. More than 50 percent of the teachers indicated that most of the students who did attend regularly benefited from the special assistance provided to them by the centers.

Classes in which both language arts and mathematics were taught were very similar in structure to those in which language arts alone were taught. The mean enrollment in five visited rooms was also 17 and the mean attendance was 70 percent. Facilities were similar in size and were provided with computer terminals and a variety of instructional materials acquired over the years by the teachers. Over 90 percent of the teachers had instructed these classes in previous years.

Students were observed generally on task, either working independently or receiving whole class instruction from the teacher. Although nothing exceptional was noted in the instructional process, nothing negative was noted either. Teachers surveyed during observations indicated that they thought that students who attended regularly were those who benefited most from the program. Through the years, teachers have reported frustration in their attempts to motivate some students to attend. The main source of this problem seems to stem from the fact that the students do not receive high school credit for their participation. Better academic achievement because of their participation does not seem to be a motivating factor.

Staff Development

Teachers interviewed during school visitations indicated that the amount of inservice training they receive should be increased. Though they took part in the general school staff inservice training, specific training designed for the centers was minimal. As in fiscal 1988, most teachers during 1989 reported attending only one inservice training session designed specifically for their program. Increased staff development has been an annual request since 1985. It was then that district staff was reorganized; consequently, coordinators, who had served each Chapter 1 option, were reassigned or given additional tasks that reduced the time they had available to conduct inservice meetings.

Companies that supplied instructional packages also provided inservice sessions. Company consultants also assisted teachers as the need arose after an initial orientation.

The staff development meetings were reported as adequate but too few in number. As in past years, there were requests for additional opportunities to share ideas and problems with other teachers.

Student Attendance

During fiscal 1989, high student absenteeism persisted in the centers. As mentioned previously, 66 percent of surveyed principals indicated that low student attendance was a program limitation. This particular problem has been cited since 1984.

Analysis of teachers' attendance books showed that more than three-quarters of the students rarely came to class (17+ absences) and another quarter had excessive absences (7-16 absences). Tables 1 and 2 contain specific data obtained from the Department of Information Processing Services.

TABLE 1
Student Absences by Number of Days - Language Arts Learning Centers

No Absences	1-3	4-6	7-9	10-11	14-16	17+	Totals
15%	18%	14%	11%	9%	6%	28%	100
(340)	(400)	(311)	(240)	(209)	(128)	(628)	(2,256)

TABLE 2
Student Absences by Number of Days - Mathematics Learning Centers

No Absences	1-3	4-6	7-9	10-11	14-16	17+	Totals
16%	20%	14%	10%	9%	5%	26%	100
(300)	(370)	(262)	(197)	(166)	(98)	(485)	(1,878)

Students enrolled in centers where both language arts and mathematics were taught demonstrated similar attendance rates during observations. Of a total of 83 students enrolled in five visited classrooms, the attendance rate was 58, or 70 percent of the students.

As in the past, the centers did not meet the objective of at least 80 percent of the students attending the program on at least 90 percent of the scheduled school days.

The relationship of high absenteeism to low achievement is discussed in the following section.

Performance Objectives

Included in the evaluation design for fiscal 1989 were objectives that stated that the average one-year gain would be two NCE units both in reading comprehension and mathematics problem-solving, as measured by the *Tests of Achievement and Proficiency* (TAP); however, due to a change in the testing schedule from November to April, posttest data after a year of participation in the centers were not available.

To provide an estimate of the degree to which these students were underachieving, pretest scores from the *Iowa Tests of Basic Skills*(ITBS) and TAP are shown in Tables 3a and 3b.

TABLE 3a
Standardized Pretest Scores Used to Select Language Arts Learning Center Participants

Grade	Number of Students	Reading Median GE	Median NCE
9	1,242	6.9	32.8
10	548	7.6	32.8
11	74	8.4	34.4
12	20	8.2	29.2
Total	1,884		

TABLE 3b
Standardized Pretest Scores Used to Select Mathematics Learning Center Participants

Grade	Number of Students	Mathematics Median GE	Median NCE
9	1,119	7.1	30.5
10	407	8.2	34.5
11	58	8.3	31.7
12	25	8.7	31.2
Total	1,609		

Analysis of test data since the initial year of implementation has shown that most students selected as participants are between the 20th to 30th percentile in reading and mathematics. As measured by the ITBS or TAP, only 41-50 percent of the center students have made gains, which is less than the 60 percent stated in the objectives.

Another objective for the centers was that at least 75 percent of the students would pass in either English or mathematics. Tables 4a and 4b show that the objective was not met; 57 percent passed all English courses the first semester and 67 percent, the second. In mathematics, the passing percentages were lower: 48 percent the first semester and 56 percent, the second.

Tables 4a and 4b also indicate that fewer students passed during the first semester than in the second. One can also note a drop in enrollment from the first to second semesters. High absenteeism probably plays a major role in the program's not meeting the objective of 75 percent of the students passing.

TABLE 4a
Percentage of Language Arts Learning Center Students Passing or Failing English

	First Semester		Second Semester	
	N	Percentage	N	Percentage
Passed all courses	1,251	57	1,280	67
Failed at least one course	929	43	637	33
Total	2,180	100	1,917	100

TABLE 4b
Percentage of Mathematics Learning Center Students Passing or Failing In Regular Mathematics Subjects

	First Semester		Second Semester	
	N	Percentage	N	Percentage
Passed all courses	814	48	856	56
Failed at least one course	892	52	666	44
Total	1,706	100	1,522	100

Enrollment Status of Language and Mathematics Learning Center Students

Underlying the program goal of increasing student achievement is the assumption that if students experience success in school they are more likely to complete the school year and/or graduate from high school. An objective was that at least 85 percent of the students would complete the 1988-89 school year and would reenroll in high school the following fall. Analyses of student status information showed that this objective was met by the Language Arts Learning Centers and Mathematics Learning Centers. Language Arts Learning Center participants had a dropout rate of 14 percent; another four percent transferred to another school; one percent transferred to evening school; and one percent graduated. A total of 80 percent of the students reenrolled in the school that they had attended the previous year. The Mathematics Learning Centers had 79 percent of the students reenroll in their schools. Another five percent transferred and one percent graduated, leaving a dropout rate of 15 percent.

Summary

In 1989, as in previous years, the centers have operated without serious delays in implementation; however, problems with adequate student attendance and achievement have persisted. Passing rates for participants in English and mathematics courses have consistently been below both citywide rates and those of the objectives.

The program did meet the objective that stated at least 85 percent of the students would reenroll in school the subsequent fall. In addition, though most students ranked between the 20th and 30th percentile in reading and mathematics based on their standardized test scores, 67 percent passed their English courses and 57 percent passed their regular mathematics courses.

Conclusions

- No serious problems were encountered in implementing the LAMLC on a timely basis in the high schools. Continuing problems include the late arrival of ordered materials and student scheduling conflicts.

- Facilities for conducting the programs were rated "adequate" for providing small-group and individualized instruction.

- Principal and teacher input, on-site observations, and examination of class records indicate that a continuing problem is high student absenteeism.

- LAMLCs did not meet objectives for passing grades in English and mathematics classes.

- ECIA Chapter 1 teachers noted the need for additional inservice training in order to share ideas and problems with other teachers.

- Both principals and teachers agree and the high number of low-achieving ninth and tenth grade students confirm that there is a need to continue the program.

Recommendations

- Data over the years suggest a need for modification of the content and procedures of the program in order to increase student achievement and attendance.

- During the 1989 school year as well as in previous years, there is no evidence of parental involvement in LAMLCs. Emphasis should be placed on determining ways to increase and incorporate parental involvement.

- Staff development should be expanded to include training related to motivating and instructing underachieving students.

- If possible, staffing and scheduling of classes should be done so that students served by the LAMLCs are in close proximity to all their regular classes .

- Consideration should be given to the addition of a counselor component.

LIFE SKILLS LEARNING CENTER

The Life Skills Learning Center is designed to improve the academic and behavioral performance of underachieving high school students through remediation of specific problems. Student participants receive counseling and tutorial services in small groups to improve their skills in reading and mathematics and, in turn, to help them prepare for entry into the job market. Center activities were related to the regular classroom work.

In fiscal 1989, this program option operated in 36 high schools through funds provided by both Chapter 1 and Chapter 2. Of the 36 high schools, 22 were funded under Chapter 1 and designated as Life Skills Learning Centers and 14 were funded under Chapter 2 and designated as In-School Guidance and Tutorial Centers.

One of the centers was in its first year of implementation; all others were continuing programs, most in their sixth year. The number of schools operating the program has remained rather constant since the program's inception.

Evaluation Plan

Evaluation of the centers was conducted to describe program implementation, acknowledge any problems that may have occurred, assess program results in relation to the objectives, and make recommendations for improvement.

Information on each student participant was collected monthly through the optically scannable *Student Information and Participation* (SIP) form. This generated data on student enrollment and attendance, number of days assigned and served, and reason(s) for referral. To assist the participating schools, the *Secondary Supplementary Services: Evaluation Information and Procedures Handbook - Fiscal 1989* was published and disseminated. It was specified that, in addition to the SIP, data were to be collected from several sources, including administrator and teacher questionnaires and classroom observations.

Implementation

A questionnaire concerning program implementation was distributed to the principals administering a Chapter 1 Life Skills Learning Center or a Chapter 2 In-School Guidance and Tutorial Center. The questionnaire was returned by nearly 60 percent of the principals. All indicated that their center's teacher specialist was assigned by September 30, 1988. Only 25 percent of the administrators indicated that there were persistent implementation problems. The remaining principals either indicated no problem or did not respond to the questionnaire item. The most frequently mentioned problem was delayed delivery of instructional materials and/or equipment (15 percent) followed by student scheduling conflicts (10 percent), record-keeping (10 percent), and low student attendance (5 percent).

Student Participation

According to program guidelines, students were eligible to attend the Life Skills Learning Centers if they met the general Chapter 1 criteria, i.e., at least one year below grade level or scoring in the fourth stanine in basic skills. The centers enrolled students who were deficient in test-taking or job-readiness skills, in need of behavior modification, lacking in school and life-coping skills, or requiring assistance in decision-making. Life Skills was available to students on a voluntary basis or as a course option. Students were enrolled in the centers through referral from the discipline office or, in a few instances, through the recommendation of a class teacher. If a class teacher recognized that a student had special needs that were not being met by the regular daily schedule, the student was placed in a Life Skills Learning Center. With such a wide range of criteria, the selection of participating students and class size varied from school to school.

Students who were assigned to a Life Skills Learning Center for a limited number of days were required to work on assigned activities provided by their regular class teachers or instructional activities provided by the center's teacher specialist. Students remained in the center the entire school day for the number of days assigned.

Enrollments in a sample of Life Skills classes ranged from as many as 25 students to as few as three. The length of time students were enrolled was a function of the program structure. Students who were programmed into the Life Skills Centers as a course option were scheduled for either the full school year or one semester, attending the centers just as they did their regular classes, i.e., daily for a 40-minute period.

The most common program design, used exclusively by Chapter 2 schools, served students who were referred from the discipline office. In this design, students were assigned to an In-School Guidance and Tutorial Center for approximately one to five days as a result of an act of misconduct that required disciplinary action. The exact number of days a student was assigned was based on the severity of the infraction.

Classroom Observation

Observers from the Department of Research and Evaluation, Bureau of Program Evaluation, visited all Life Skills Centers and In-School Guidance and Tutorial Centers. The students were most frequently observed studying independently, participating in discussion group activity, or listening. Though few students were observed in nonproductive activities (talking unnecessarily, sleeping, etc.), the overwhelming number appeared cooperative. Most seemed to understand what was expected of them and they displayed initiative and independence. Thus, most students were on-task.

Instruction

In the Life Skills Learning Centers, the most frequently used teaching approach was independent study. Teachers moved among the students to check their activities and respond to their requests for help. In the teacher-directed mode, teachers more often requested student responses and encouraged students to answer questions. In the one case where no interaction was recorded, the teacher was engaged in clerical activities related to the program. A teacher aide was assigned in 92 percent of the Life Skills Learning Centers. Most often, the aides performed clerical tasks, monitored student activities, and worked with either individual students or small groups. The instructional approach used seemed to be correlated with the program design.

Because independent study was the most frequent mode of instruction, textbooks were the instructional materials most often observed in use. Students were engaged in assignments in English, reading, mathematics, and social studies. Teachers most often circulated the room to monitor student work or worked one-on-one with the student in a tutorial mode. Personal guidance, career guidance, and job-readiness activities were classified under the teacher-directed approach. When this approach was observed, teachers were most often leading a discussion with the whole class on topics such as values clarification or behavior modification. While job-preparation skills were taught in a few cases, they did not appear to receive a great deal of emphasis. In addition to textbooks and worksheets, computers were the most frequently observed materials being used. Workbooks, learning kits, supplementary books, reference books, and magazines were also observed with about the same frequency.

One of the new guidelines for the fiscal 1989 Life Skills Learning Centers required that the teacher specialist reach beyond merely requesting assignments from the students' regular class teachers. Center teachers were to prepare lesson plans suitable for their instructional program. The observation instrument required that evaluators indicate whether the instruction appeared to reflect a lesson plan. Inherent in this observation was a judgment as to whether the learning activity seemed to be presented in conjunction with a large instructional unit or was simply busy work. Evaluators indicated that approximately half of the learning activities reflected an individual lesson plan and half did not.

Learning Environment

Evaluators described the overall learning climate of the Life Skills Learning Centers (Chapter 1) and the In-School Guidance and Tutorial Centers (Chapter 2). Included in this description were ratings of the centers' conduciveness to learning, attractiveness of the classroom, and the condition of the physical facility. Upon review, each center was rated as having a positive or negative learning environment.

In the centers that were rated positive, the students were generally quiet and on task. The classrooms were bright and attractively decorated with motivational aids on bulletin boards. Most were described as neat in appearance and equipped with course sets of textbooks and supplementary reading materials such as learning kits, games, novels, encyclopedias, magazines, etc. Students knew what was expected of them. Generally, a routine was established and adhered to.

Negative environments were characterized by unattractive rooms and noisy and unstructured settings where students may or may not have been on task or cooperative. The physical facilities were most often not a regular classroom (a small conference room, closet, or basement space). For example, one learning center was housed in a makeshift room partitioned outside the school nurse's office. The area was very noisy as students came and went for early dismissals from school or sought medical attention. Although the learning center was well organized and structured, the environment was rated "negative" because of the high degree of distractive and disruptive activity going on behind the partition. The teacher's business-like attitude, accompanied by reminders to stay on task, diminished the potential for unacceptable student behavior.

In 80 percent of the Chapter 1 Life Skills Learning Centers, the environment was rated positively conducive to learning. All of the Chapter 2 In-School Guidance and Tutorial Centers were given positive ratings for the overall learning climate. The few Chapter 1 programs that received negative ratings (20 percent) were almost always unstructured, undisciplined situations.

Staff Development

While only 10 percent of the principals indicated this area of the program as a limitation, it was very clearly indicated through informal conversations with the teachers that they felt inadequately informed about the program. They indicated that they were not apprised of the changes in program guidelines, did not know whom to call with questions, and could not express their needs and frustrations. In addition, they did not know what would or did work, they were unable to view new materials, and were unable to meet other people in the program. These findings were confirmed on the teachers' questionnaires, which indicated that 92 percent of the teachers had not attended any inservice meetings conducted specifically for program staff during the school year. Those who did attend at least one meeting identified their principal as the person who conducted the inservice staff training.

Program Effectiveness

Attendance

Estimates of student attendance in the Life Skills Learning Centers were computed from the observation records. Observed classes in schools funded by Chapter 2 had an average attendance of 90 percent, while those in Chapter 1 schools had an approximate 60 percent attendance average.

Strengths and Limitations

Principals identified the strengths of this program option as follows: staff (90 percent), facilities (55 percent), materials (50 percent), parent involvement (35 percent) and equipment (30 percent). Some principals viewed equipment and materials as a limitation (20 percent), facilities (15 percent), vendor program (15 percent), and parent involvement (10 percent). Areas in which the program has been beneficial, according to the principals, included improved student achievement and attendance (65 percent), reduced dropout rate (55 percent), and improved student self-image (10 percent).

All but one of the responding principals indicated satisfaction with the results of this program. The one principal was "not sure." When asked if they would want to continue the program option the following year, 85 percent of the principals stated they would. One responded "no" and the rest did not respond to the item.

Objectives

Specific objectives for improvement in achievement, motivation, behavior, and continuance or completion of high school were stated for both the Chapter 1 and Chapter 2 programs. Data from center teacher observations of individual students indicate that 97 percent of the students were cooperative during the time they were assigned. Student improvement in classroom and social behavior was assessed by a teacher survey. Responding teachers, on the average, estimated that slightly less than half the students they served actually improved their classroom and social behavior. Data for continuance or completion of high school for Life Skills Learning Centers and In-School Guidance and Tutorial Centers are not available.

Achievement objectives could not be measured in terms of normal curve equivalent (NCE) score gains on the *Tests of Achievement and Proficiency* (TAP), as anticipated, because of a change in the high school test form and schedule.

Summary and Conclusions

The Life Skills Learning Centers provided services to underachieving high school students in the 1988-89 school year.

According to principals, the quality of the staff was a program strength, although teachers reported they did not receive sufficient inservice training for the program.

The principals indicated that they would continue the Life Skills Learning Center program if it were offered again.

F.

NONPUBLIC INSTRUCTIONAL AND SUPPORT SERVICES

NONPUBLIC INSTRUCTIONAL AND SUPPORT SERVICES

Prepared by Thomas Sharp

Basic instructional and support services were provided to nonpublic schools in fiscal 1989 in compliance with the United States Supreme Court's decision in *Aguilar v. Felton.*

Under ECIA Chapter 1, the nonpublic schools hired vendors to supply computer equipment, software, and related material. In addition, the vendors were responsible for maintaining their equipment and software and providing inservice training.

This report evaluates the effectiveness of the vendor-sponsored computer laboratories used by nonpublic school students during the 1988-89 school year. Most of the information gathered for this report comes from the *ECIA Chapter 1 Nonpublic School Questionnaire.* The questionnaires were mailed to all schools with operational computer laboratory programs. A total of seven high schools and 60 elementary schools returned completed questionnaires. Because of the small number of questionnaires returned by high school personnel, those results are combined with the findings of the elementary schools, unless otherwise stated.

Additional information was gathered via school visits and phone conversations with nonpublic school principals and school staff. The Dial-a-Drill program is not included in the report. In this program, students phoned a central computer and received supplementary homework assignments. The program was not fully implemented in fiscal 1989.

Program Implementation

The instructional and support services program operated in approximately 90 nonpublic elementary and 15 high schools during the 1988-89 school year. The facilities were staffed with approximately 30 teachers, 3 aides, 3 school-community representatives (SCRs), and 80 parent community volunteers that had some computer training. Participating students had to reside in an eligible Chapter 1 attendance area and be at least one year below grade level in reading and/or mathematics.

Characteristics of the Computer Labs

Well-run computer labs typically exhibited the following characteristics:

- The lab was taught by a teacher or paraprofessional with some teaching and/or computer experience.
- The lab teacher/supervisor reported directly and frequently to school principal; the principal provided help and guidance as needed.
- The lab teacher/supervisor participated as an equal with other staff concerning scheduling and pullout arrangements for lab students.

- The lab students were grouped by subject and ability levels.
- The lab students were taught in small groups and received individual tutoring as needed, in addition to their computer lessons.
- The vendor supplied equipment and materials in a timely fashion; repairs were made quickly.

Some labs, approximately 20 of the 67, were not run as successfully. The characteristics of these labs were as follows:

- The lab was supervised by a parent or community volunteer.
- The lab teacher/supervisor rarely communicated with the school principal and received little help or guidance from the principal or other administrators.
- The lab teacher/supervisor was treated as subordinate to other staff. He or she did not participate fully in the decisions regarding scheduling and pullout arrangements for lab students.
- The lab students were grouped heterogeneously, regardless of subject or ability levels.
- The lab students were taught in small groups, but had little individualized tutoring.
- The vendor's supplies were late and inadequate; equipment was frequently broken and remained so for long periods of time.

Physical Condition of the Computer Labs

Most computer labs were located in main buildings' upper floor classrooms, for security reasons. Approximately one-fifth of the labs were in mobile units; a few were in "neutral sites," which were rented rooms or buildings adjacent to or near the school. Both on-site observations and phone conversations confirmed that there seemed to be no major problems regarding the physical locations or layouts of the labs.

Data from questionnaires as well as on-site observations indicated that equipment was functioning. One school, however, indicated that its lab was virtually shut down because of a lack of equipment and the failure of Midwest Visual to make repairs. Three other schools indicated the functioning of their labs was impaired because of the failure of their vendors to replace defective discs or provide an adequate supply of reading materials. The vendors cited were New Century/Bhards, Prescription Learning, and Wasatch.

Laboratory Groupings

Students were grouped either by achievement level or grade level. Several schools using the grade level approach had problems because of the highly varied achievement levels and correspondingly high degree of adjustment of the program contents necessary to meet each student's needs. This grade level approach occurred most frequently in schools with small numbers of Chapter 1 students. The Chapter 1 program in these schools was often subservient to, rather than coordinated with, the regular school program. In these schools,

schedules and school events were adjusted in favor of non-Chapter 1 classrooms and staff. Students in need of Chapter 1 services were obligated to take their lab classes at the same time, regardless of their individual needs and progress levels.

Subjects Taught

The subjects taken by the majority of students in the computer labs during the 1988-89 school year were divided almost equally between only reading and both reading and mathematics. A small number of student groups took only mathematics or other subjects which included science, language arts, and/or data processing.

Among the individual vendors, New Century/Bhards offered reading almost exclusively, while National School Services most frequently offered both reading and mathematics. Other subjects such as science, language arts, and data processing were offered only by Wasatch and Midwest Visual.

TABLE 1
Average Number of Schools and Students Served in Computer Labs

(N=64)

VENDOR	Reading Only		Math Only		Both Reading and Math		Other Subject	
	No. of Schools	Average No. of Stdnts.	No. of Schools	Average No. of Stdnts.	No. of Schools	Average No. of Stdnts.	No. of Schools	Average No. of Stdnts.
Computer Curriculum Corp.	3	35	3	19	11	67	0	0
Eclectic (multiple vendor)	2	70	0	0	0	0	0	0
Midwest Visual	3	46	0	0	0	0	2	78
National School Services	2	70	0	0	13	64	0	0
New Century/ Bhards	13	59	1	9	1	12	0	0
Prescription Learning	5	58	2	65	10	99	0	0
Wasatch	6	52	1	30	4	58	4	35
Total	34	56	7	32	39	72	6	49

Note: Some schools served students in more than one category.

Computer Lab Teachers/Supervisors

The computer labs were taught or supervised in 79 percent of the schools by proctors. The majority of these proctors were parents and other community members. Chicago Public Schools' staff taught in approximately 25 percent of the computer labs. Local teachers, an aide, and a college student taught or supervised the remainder of the labs. (See Table 2.)

Teachers or other professional staff were most prevalent in New Century/Bhards and Wasatch labs; the latter found most often in high schools. Only one of the 16 Prescription Learning schools had a teacher in charge of the lab.

Chicago Public Schools' staff were usually placed in labs at neutral sites or in mobile units. The majority of labs located in main school buildings were taught/supervised by proctors or local school staff.

TABLE 2
Position of the Teacher/Supervisor in the Computer Lab Listed by Vendor

(N=57)

VENDOR	No. of Schools	CPS Staff	Local Teacher	Local Proctor	Local Aide
Computer Curriculum Corp.	10	3	0	8	1
Eclectic (multiple vendor)	2	2	0	0	0
Midwest Visual	3	1	0	1	0
National School Services	14	4	0	11	0
New Century/Bhards	13	5	0	9	0
Prescription Learning	16	1	0	16	0
Wasatch	9	1	3	8	0

Note: Some schools had more than one staff member in the computer labs.

Classroom Approaches

Most classes were taught in small groups. It was reported that approximately two-thirds of the labs also used individualized instruction in addition to the computer lessons to assist students in need of special help. Only 11 teachers/supervisors taught the whole-class approach. In 11 instances, the computer staff performed no other teaching duties. Instances of the lab staff teaching classes outside the lab were rare. (See Table 3.)

TABLE 3
Teaching Duties Performed by Computer Lab Staff Listed by Vendor

(N=55)

VENDOR	Teach Small Groups	Teach Individual Students	Teach Whole-Class Group	No Response
Computer Curriculum Corp.	7	4	2	0
Eclectic (multiple vendor)	0	0	0	2
Midwest Visual	2	1	0	0
National School Services	9	6	2	0
New Century/Bhards	11	7	2	1
Prescription Learning	12	8	1	0
Wasatch	6	8	4	0

Note: Some lab staff performed more than one teaching duty.

Nonteaching Duties

With the exception of five teachers, staff in charge of the computer lab reported performing various nonteaching duties. Maintaining student progress records and monitoring the lab were the duties most frequently performed by the staff. Approximately three-quarters of the respondents also helped maintain the computers and other lab equipment. (See Table 4)

TABLE 4
Nonteaching Duties Performed by Computer Lab Staff Listed by Vendor

(N=59)

VENDOR	Monitor Lab	Maintain Equipment	Maintain Progress Records	Other	No Response
Computer Curriculum Corp.	10	9	10	2	0
Eclectic (multiple vendor)	0	0	0	1	1
Midwest Visual	2	2	3	0	0
National School Services	14	9	13	0	0
New Century/Bhards	10	7	12	4	0
Prescription Learning	15	11	14	2	0
Wasatch	8	6	7	1	1

Note: Most lab staff performed more than one nonteaching duty.

Inservice Training

Staff most frequently received Chapter 1 inservice training within the respective school; however, only 9 of the 66 responding schools indicated that the principal received Chapter 1 inservice training. Only one school claimed to have received no inservice training at all.

Training was usually provided by the vendor alone or the vendor in conjunction with Chicago Public Schools' staff. In some instances, Chicago Public Schools' staff alone provided the inservice. With few exceptions, schools rated the inservice training adequate.

Student Selection Criteria

Students were selected according to the following criteria:

- Low test scores (usually one year or more below level)
- Teacher recommendation
- Low classroom achievement.

The following were also used for student selection, but to a lesser degree than the preceding:

- Parental requests
- Counselor requests.

Several schools felt that the low-income criterion limited the numbers of students who would have otherwise benefited from the Chapter 1 program.

Exit Criteria

The majority of the students received Chapter 1 services throughout the school year. In those schools where students exited the program before the end of the school year, transfers to another school was cited as the reason by 16 of the 20 elementary schools. Some schools, however, exited students from labs and into the regular program. These schools cited the following reasons for early exit: improved grades (five schools), teacher/principal judgment (two schools), disciplinary reasons (three schools). In the 20 elementary schools, an average of five students per school exited the lab program during the 1988-89 school year.

Five of the seven responding high schools had students exit the Chapter 1 program. The average number of exiting students was 17. Three of the five schools cited student transfers as the sole reason for leaving the Chapter 1 program; the other schools used grade-point average and/or parental request as the exit criteria.

Program Implementation

Only four of the 62 responding schools indicated that their program was initially implemented in the 1988-89 school year. Most of the Chapter 1 programs were instituted between the fall of 1986 and February of 1988.

Most of the schools had all their materials and equipment by the start of the school year, usually in August or September. Approximately 20 schools did not have all of their materials but received deliveries from October through May. Two schools were still without some materials at the time they returned their evaluation questionnaires.

Important differences were noted among the various vendors regarding the frequency and degree of late deliveries. (See Tables 5 and 6.) National School Services had the best delivery record. (Note: Two October-November and December-January dates in Table 6 for National School Services represent start dates for the programs and not delay dates on delivery.)

The other vendors had close to a third of their schools complain of late deliveries. In most instances, these late deliveries involved reading materials or computer replacement parts. Most schools indicated that they made complaints regarding the late deliveries to the vendor and the central office staff.

TABLE 5
On-Time Delivery of Materials and Equipment Listed by Vendor

(N=64)

VENDOR	On Time Delivery for Programs	Late Delivery for Programs
Computer Curriculum Corp.	16	6
Eclectic (multiple vendor)	0	1
Midwest Visual	4	2
National School Services	23	3
New Century/Bhards	10	4
Prescription Learning	18	8
Wasatch	11	5
Total	82	29

Note: Some schools received on-time deliveries for one subject and late deliveries for another subject.

TABLE 6
Availability of Materials by Month

(N=59*)

VENDOR	Aug.-Sept.	Oct.-Nov.	Dec.-Jan.	Feb.-Mar.	Apr.-May	Not yet Available
Computer Curriculum Corp.	8	0	0	1	3	0
Eclectic (multiple vendor)	0	0	1	0	1	0
Midwest Visual	2	0	1	0	1	0
National School Services	8	2**	2**	0	1	0
New Century/Bhards	7	3+2**	0	0	0	1
Prescription Learning	10	3+1**	1	1	1	0
Wasatch	5	1	1	1	0	1

Note: *Some schools received materials for various subjects at different times of the year.

**Programs began in these months, so materials were on time.

Program Strengths

Most schools responding to the questionnaire indicated that the computer labs were an asset to their educational program. Most frequently cited as a benefit was the individualized instruction aspect. Other strengths of the program included student enjoyment, remediation for below average students, good materials that were adaptable to a variety of needs, and good teachers.

Other benefits were cited. First, without the Chapter 1 program funding, few, if any, of these nonpublic schools could have afforded the extensive and expensive computer hardware and software available to them. Second, the computers provided a needed diversion from the daily school routine for many of the students. This was especially true in the upper grade levels of the elementary schools and in the high schools. Several high schools credited the program with reducing their dropout and truancy rates by allowing students to "escape" the classroom without "escaping" school.

It is important to note that all respondents plan to continue to participate in the Chapter 1 program in fiscal 1990. In addition, all but five schools will keep the same Chapter 1 program. Three of the five schools changing programs are doing so by adding another subject to their existing program, rather than changing vendors.

Program Limitations

One frequently cited limitation of the computer lab programs was the eligibility requirement which prohibited students outside Chapter 1 attendance areas from participating in the programs. Other limitations included lack of equipment, late delivery of supplies/equipment, and poor vendor service.

Based on observations and phone contact, the greatest weakness of the Chapter 1 lab programs in the nonpublic schools was the lack of involvement by the principal and other local school staff with the day-to-day functions and needs of the the lab programs. The problem existed in at least 20 schools and was manifested most frequently by the unwillingness of the school administration and non-Chapter 1 teachers to provide help or guidance when it was needed as well as their failure to share important student information with the Chapter 1 staff.

In a few extreme cases, contact between the Chapter 1 staff and the local teachers was limited by the school administration. This created hostility among staff and a poor learning environment in the Chapter 1 labs. When dealing with the Chapter 1 staff that was largely nonprofessional in terms of teaching experience and computer training, it was imperative that the school administration and teaching staff offered support and guidance.

As noted earlier, only nine of the 66 responding schools indicated the principal had taken part in the inservice training program. Only one of those nine schools had problems with implementation and the day-to-day operations of the Chapter 1 lab programs. It appears that when the school administration took a hands-on approach in dealing with the Chapter 1 program, it had a much better chance for success.

Another limitation was the lack of qualified staff to teach or supervise the computer labs. Proctors, who made up two-thirds of the teachers/supervisors in the nonpublic school computer labs, were parents and/or community volunteers. They often received inadequate training and had little or no experience in order to implement and maintain the computer program at a satisfactory level. This staff received low wages and few incentives to perform this needed function well. Thus, in spite of the best efforts by school administrators and Chapter 1 staff, some programs failed to realize their full potential due to lack of human resources.

The last limitation of any consequence was the poor effort put forth by some vendors in individual schools. It is important to restate that the vast majority of the vendor programs **were** implemented successfully and functioned well. In a few schools, however, Wasatch, Prescription Learning, and New Century/Bhards were cited frequently for poor service. Long delays to make repairs and failure to replace defective computer parts or discs were most frequently cited as problems. At least three schools had severe communication problems with the vendor and the central or district office personnel assigned them.

The source of vendor problems may well have been an individual service representative rather than the vendor management itself. Complaints addressed to the district or central office staff were occasionally given low priority or ignored, according to some schools. Whatever the cause of these problems, they should be investigated and corrected by vendor management and central office administrators.

Recommendations

- Improve participation by school administrators in the operation of the Chapter 1 program by requiring their attendance at inservice meetings and other program-related meetings and by stressing the need for principals to provide guidance to program staff.

- Encourage Chapter 1 central office and school staff to share ideas and provide information on software and program techniques to non-Chapter 1 teachers to foster more staff interaction.

- Assure that Chapter 1 staff have direct access to both vendor and central office representatives to expedite materials and equipment deliveries and repairs.

- Consider additional funding or reallocation of funds to Chapter 1 teaching and supervisory staff in the labs in an effort to draw more professional, trained staff into the program.